JUNE, 1951

Industrial FINISHING

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got a finishing problem?

Advance PAINT COMPANY

TO GIVE YOUR PRODUCT A GOOD START, GIVE IT AN INTERCHEMICAL FINISH!

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Enamels for Metal . . . Plastic . . . Wood

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Enthone metal strippers

no attack on the base metal

strip in barrels, baskets or bulk... without electric current

metal stripper A A new alkaline compound that chemically dissolves nickel, copper, zinc, cadmium and silver from steel without etching or attack. The steel is clean and ready for refinishing. Suitable for rack, basket or barrel stripping. Removes excess silver solder from steel rapidly. Patents pending.

metal stripper N-165S A compound added to acid solutions to promote rapid stripping of nickel, tin and lead coatings from copper alloys. No electric current is required.

WRITE FOR LIST OF SIXTY PRODUCTS AND PROCEDURES FOR METAL FINISHING

ENTHONE

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CHOICE OF FINISHES HELP SELL PHILCRAFT TABLES

This mahogany corner table from the 700 series by Philcraft Inc., is as modern as tomorrow, and available to customers in a choice of Blond Mahogany, Cordovan Mahogany or Black Lacquer.

These finishes, created especially for Philcraft in our studios, are every bit as modern as the fine furniture they protect and beautify. Our specialists see to it that every finish fulfills the needs of the manufacturer, in appearance, quality, and production economy.

The Better the Finish, the Better the Buy

GRAND RAPIDS VARNISH CORPORATION

GRAND RAPIDS, MICHIGAN

Makers of the Famous Guardsman Finish and Guardsman Cleaning Polish

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Industrial FINISHING

W. H. ROHR, Editor P. C. BARDIN, Associate Editor

Contents

JUNE, 1951
Vol. XXVII, No. 8

CCA

monthly magazine for finishing
om and paint shop foremen,
oduction superintendents,
emists, purchasing agents and
mpany executives of industrial
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d finishing are major opera-
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d products.

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Random Comment on the Industrial Scene..... 4
Automatic Spray Painting (Part IV)..... 28
Painting Gasoline Station Pumps..... 40
Durable Organic Coatings Pinch Hit for Scarce Metals 52
Finishing Movie Film Reels..... 56
Painting Trucks . . . Masking..... 61
What Will It Do for Me?..... 67
Selling a New Hand a Filling Job Has Its Points, But Who Said Psychology Was the Answer?.. 72
Letters from Readers..... 82
Questions and Answers..... 92
Materials; Supplies; Equipment..... 96
Booklets; Circulars; Catalogs..... 110
Editorial 112
"Classified Advertising" Section..... 125
Advertisers Index 128

J. C. Hager Appointed to OPA Committee 36
Turco Appoints Keating..... 36
P.P.G. Co. Opens New Plant in Torrance, Calif..... 48
National Chemical & Plastics Adds N.Y. & N.C. Salesmen 48
Sharpe Represents Dolan in N.C. and Virginia..... 58
Fire Fighting Demonstration..... 58
Daylight Saving Time Card..... 62
Wet Abrasive Blasting..... 62
Steelwool in Finishing..... 76
J. C. Hager Addressed the Wood Producers Conference 94
Solvent Cleaning Service in Louisville, Ky..... 94
Steffens Appointed by Osborn Mfg. Co..... 100
L. K. Scott Elected V. P. of Jones-Dabney Co..... 100
A. C. Towne Becomes President of Mich. Oven Co..... 104
Free Book "Idea Generators" 105
T. J. Mitchell, New DuPont Man in Chicago Region..... 107
Zehrung Chemical Co. Represents McCloskey 117
New DeVilbiss Building..... 118
New Report on Lighting..... 121
Power Brushing Setup Cleans Golf Shafts..... 122

Acceptance under Section 34.64, P. L. & R., authorized

27 TWENTY-SEVENTH YEAR OF PUBLICATION

Alloy Resists Corrosion. Discovery has been made of a new alloy that will resist corrosion and the tendency of many stainless steel materials to gall and seize when used in plugs and valve discs. Manufacturers of stainless steel have long faced the problem of producing such fixtures to be used in oil refineries and chemical plants.

This new alloy known as "V2B" is said to be three times harder than the ordinary alloy, and is also corrosion resistant. According to information supplied to the Editor, this new alloy was discovered or developed by Norman S. Mott, chief metallurgist of Copper Alloy Foundry Co., Hillside, N. J.

* * *

Rubber Extender. A new polymer called Rubbatex has been developed. It is used for replacing and extending natural rubber latex. The material can be used in making dipped goods and for other industrial uses for which latex is applied.

When this polymer is mixed with natural rubber latex, it will extend it two or three times in quantity of combined materials. It is also suitable for use in adhesive applications, coatings, waterproofing applications and as a binder.

* * *

To Prevent Fires it is advisable to have a thorough clean up of the entire plant and storage. It is always dangerous to allow waste materials to accumulate at any time of the year, but it is doubly dangerous during extremely hot weather.

* * *

Teach 'em Facts of . . . Forty-five representatives of 35 industrial insulation contracting firms in 20 states have completed the first Industrial Contractors' Clinic sponsored by Owens-Corning Fiberglas Corporation at its research laboratories and plant in Newark, Ohio.

The purpose of the clinic, which will be held annually, is to acquaint men who sell and apply Fiberglas insulation matrials with the Fiberglas manufacturing processes and new methods and installation techniques as well as to inform the company how it can assist the contractor. . . .

* * *

More Natural Gas. Current construction of 7618 miles of new natural-gas pipeline involving record expeditures of $63,000,000, will bring new or additional benefits this year to millions of homes and thousands of industries in 125 cities of 50,000 or more population and in countless neighboring communities.

In addition to construction now under way, as authorized in 1950 by the Federal Power Commission, the fourth annual pipeline survey of the Gas Appliance Manufacturers Association also revealed that major applications

(Continued on page 7)

Introducing

A BRAND NEW, AND TOTALLY DIFFERENT PRODUCT

No. 2100

"HOT-R-COLD"

LACQUER

OVER 35% SOLIDS—May be sprayed **HOT or COLD, without thinning** or **adjusting** of **any kind.**

HEAVY BODIED *(over 35%)*
PERFECT FLOW
LIGHT COLOR
QUICK DRY
EASY RUBBING
HIGH COLD CHECK RESISTANCE

Now you can determine for yourself, whether you prefer to spray your Lacquer HOT or COLD.

OUTSTANDING VALUE

Also a "COMPANION" Sealer

Sold with an absolute GUARANTEE OF SATISFACTION

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Get Metal Parts CLEANER FASTER--CHEAPER

SEND NOW FOR SAMPLE AND FULL DETAILS ON

PELRON Corporation's Newest EMULSION CLEANERS

- New principle of detergency. Partially emulsified soil floats away—does not remain in machine to re-deposit on work.
- Less material needed for more thorough cleaning.
- Longer usable life, greatly reduced concentration means substantial saving.
- Blend of synthetic, surface-acting chemicals, non-corrosive, completely neutral, fast acting.
- Prevents rust for a number of weeks.

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Manufacturers of Industrial Chemicals

RONCI SPEEDIP WHIRL ENAMELER

Made In Two Sizes, R-100 and R-200 · Capacity 312-cu.in. and 1206-cu.in.

IDEAL FOR LACQUERING AND ENAMELING SMALL PARTS UP TO 7-IN. IN LENGTH

CUTS COSTS, SAVES UP TO 80% OF MATERIAL

Carries up to 75-lbs. per load, and up to 30 loads per hour can be coated with lacquer or enamel in these machines.

All operations are within the machine. Dipping tank is raised, submerging the parts in the basket, and then lowered and the parts whirled, throwing off excess material. No additional outside tanks required; no cleaning necessary when changing colors; no loss of material.

PROMPT DELIVERIES

Write for further information and submit samples to be coated.

RONCI MACHINE COMPANY

A Division of F. Ronci Co., Inc.
2 ATLANTIC BOULEVARD CENTREDALE 11, R. I.

involving an additional 15,866 miles of pipeline, to cost an estimated $943,640,000 awaited hearing and disposition by the Commission on January 1.

* * *

Helps Make Rubber. A new chemical development will substantially increase synthetic rubber production from the same amount of raw material now used, according to Leland I. Doan, President of The Dow Chemical Co.

The product is a new catalyst, a calcium-nickel phosphate. It will convert approximately 92% of butylene into butadiene, as compared with about 70% conversion for catalysts now in use, when proper adaptations of equipment are made.

* * *

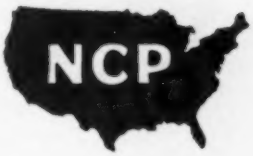
Small Homes. According to Alfred S. Levitt of Levitt & Sons, Inc., who have built more than 15,000 houses on Long Island, the American house is not likely to be reduced further in size.

Furniture designers will be grateful to learn that we have finally reached our lowest ebb in size of homes. Now they can devote all of their talents to improving the appearance and usefulness of combination furniture to fit into the present small home.

* * *

Invisible Light Too. "Protective lighting of critical industrial plants should include invisible as well as visible light," according to Carl F. Jensen of the Westinghouse Electric Corporation. At a recent Clinic On Protective Lighting, Mr. Jensen stressed that while engineered protective lighting and a high level of illumination are most important, they are not, in all cases, sufficient for detection of saboteurs or sneak thieves within the industrial plant. As a detecting aid, he suggested the use of

CERTIFIED TO MEET
GOVERNMENT SPECIFICATIONS



Lacquers

If your defense production contracts require lacquers, use the finish certified for this purpose — NCP LACQUERS. Take advantage of our engineering experience and extensive know-how with government specifications to solve your finishing problems quickly and economically. Write, wire or phone today.

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Get the BEST START with the BEST FINISH!

PCC•

"KNIGHT IN SHINING ARMOR"

New restrictions on the use of Chrome, Aluminum, Silver, Brass, Copper, Gold, Zinc and Cadmium are ushering in the "Dull Age." In response to many requests, our technicians developed simulated finishes for all these metals. These finishes are now being used successfully by many prominent firms.

Let us be YOUR "Knight in Shining Armor," to brighten up the finishes being dimmed by the "Dull Age."

●Your particular finishing problem will receive our prompt attention.

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QUOTATIONS ON REQUEST

PROCESSED CHEMICAL and COATINGS CORP.

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Phone EVergreen 7-1790

Mfrs. of Industrial Finishes

invisible light, either in the short-wave radiations (ultraviolet), or long-wave radiations (infrared).

Many chemicals are invisible in normal light but glow brilliantly when subjected to invisible blacklight. Some of these glow only during activation (called fluorescent materials), while others glow after the activating energy is removed (phosphorescent). Most fluorescent materials are harmless to humans but, in effect, sudden death to sabotage.

* * *

Oil Produced from Coal. Completion of a 2-month experimental run in which more than 50 railroad-car loads of coal were converted to synthetic oil at the Coal-Hydrogenation Demonstration Plant of the Bureau of Mines, at Louisiana, Missouri, was announced recently by Secretary of the Interior Oscar L. Chapman.

Characterizing the operation as "highly successful," the Bureau plant officials reported to the Secretary that the entire shipment of 2600 tons of coal, from the Kentucky No. 11 seam, yielded nearly 8000 barrels of synthetic oil, or 3.7 barrels of oil for each ton of moisture-free coal processed. The synthetic oil produced in this plant run will now be converted to high-octane gasoline in vapor-phase operations. Thousands of gallons of such synthetic gasoline previously produced by the Louisiana, Missouri, plant have been undergoing extensive tests by the armed forces.

* * *

Desk Tops of Sawdust. Durable, attractive and easily cleaned school desk tops molded of sawdust with special Bakelite phenolic resins and resin-impregnated paper show the commercial feasibility of making the fullest possible use of wood from America's depleted forests. Displayed by Bakelite Co. at the Forest Products Re-

(Continued on page 120)

CONVEYORIZED FINISHING SYSTEM REPLACES 3 BATCH TYPE OVENS AND DEGREASER IN SAINT PAUL PLANT

Atlas Mfg. Co., St. Paul, Minn., producers of furnace casings and boiler jackets, not only saved about 800 sq. ft. of floor space when they installed this 600-ft. conveyorized DESPATCH Finishing System with ovens on the roof, they eliminated a costly degreasing operation as well.

"The introduction of the burn-off process gives every indication that it will pay for the equipment in operating savings," says the plant superintendent.

The new system, engineered, built and installed by DESPATCH, is rated at 100 cabinets in 8 hrs. It has noticeably increased production and reduced labor costs by about 25%. Here is another example of how increased production, lower operating and maintenance costs are possible with DESPATCH Finishing Systems.

Whatever your finishing problems are, DESPATCH engineers are ready to help you solve them. Write today for Bulletin No. 51E.

DESPATCH
OVEN COMPANY

Conveyor is shown entering and leaving burn-off oven. Ware is degreased by subjecting it to 600° F. for 6 min. Finish bake time is 8 min. at 350° F.

Ware enters and leaves burn-off and finish bake ovens thru single bottom openings.

Unloading takes place at this point where the various pieces are sorted and stacked on trucks ready for packing and shipping.

...and they both come under the name of Payroll Savings...sort of "DOUBLE INDEMNITY"

THE Lilly FINESSES COMPANY

High Point, N. C.

YES, THE PAYROLL SAVINGS PLAN is sort of "DOUBLE INDEMNITY"

It's a sure way to your own Financial Security and it is a sure way to your country's defense. Take advantage of this "Double Indemnity" today by regular saving through the automatic Payroll Savings Plan.

THE LILLY "KEY" is also sort of "DOUBLE INDEMNITY"

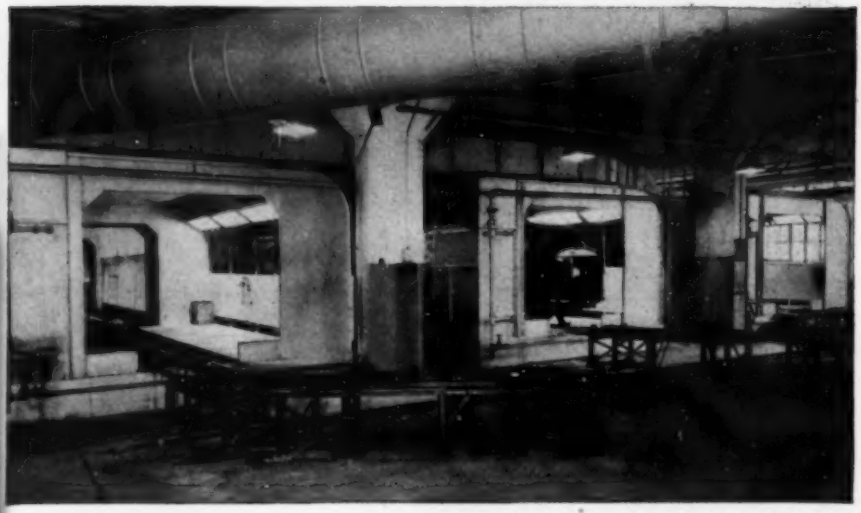
You can depend upon this "key" to provide Finishing Security and Finishing Satisfaction, for it is truly the "Key" to the Right Finish. Take advantage of the "Double Indemnity" it offers by using Lilly's Dependable Finishes—so that

"WITH THE RIGHT FINISH—YOU'LL FINISH RIGHT"

THE Lilly FINISHES VARNISH COMPANY

Indianapolis, Indiana
Gardner, Mass.

clean air costs less than dust!



Planned and Engineered by R. C. Mahon Inc., Detroit

SPRAY BOOTH MAKE-UP AIR

Multi-Duty offers proved advantages for this service

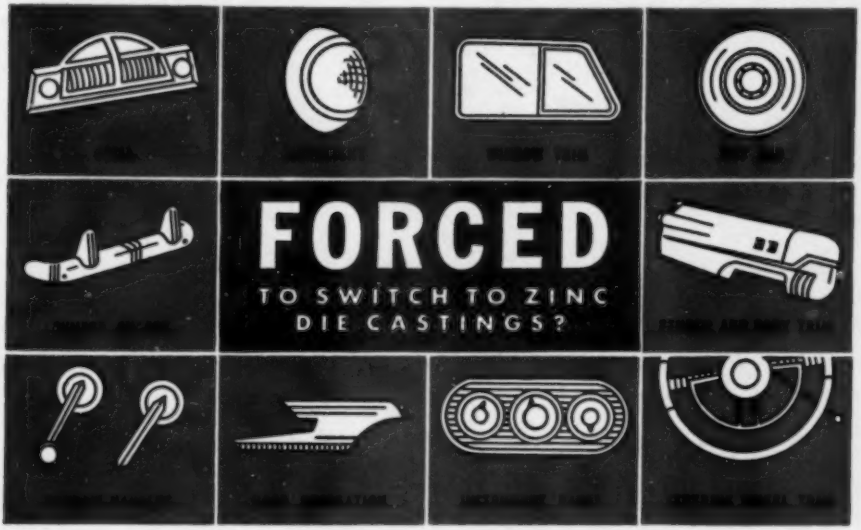
Clean *make-up* air for spray booth finishing insures fewer "do-overs" and rejects. And a constant uniform volume is essential to maintain positive pressure in the spray room to prevent infiltration of dirty air.

AAF's Multi-Duty is the ideal filter for supplying *clean* make-up air. It's automatic operation and self-cleaning features provide a constant volume of *clean* air at any predetermined CFM. Also, Multi-Duty's lapped-panel, filter curtain construction has been proved by 20 years of service. It is the most practical method yet devised for combining efficient air cleaning and positive self-cleaning, as functions of an automatic operating cycle.

For detailed information on Multi-Duty write for Engineering Bulletin No. 241B.

AAF American Air Filter
COMPANY, INC.

210 Central Ave., Louisville 8, Kentucky • In Canada: Darling Brothers, Ltd., Montreal, P. Q.



Protect them with M & W Clear Coatings that stand 800 HOURS OF SALT SPRAY!

● Zinc die castings and zinc plated steel are being used more and more as big manufacturers swing to these parts to replace unavailable materials. BUT the copper, nickel and chromium normally used for plating are in tight supply *too.*

Here's an effective way to meet this new problem. *Coat the die castings and zinc plated steel parts—instead of plating them!* Coat them with the M & W finishes that stand up under salt spray and weatherometer tests for the extraordinary period of 800 hours . . . that protect the zinc against discoloration!

Use DULAC Clear Universal Lacquer #462 if you want an air-drying lacquer—CODUR Clear Synthetic Y743 for baking. They both give the same exceptional performance. Write for free Technical Data Bulletin #110, or let our M & W technical consultants discuss your requirements with you.

PIONEERS IN PROTECTION

75th ANNIVERSARY M&W CO. 1876

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PITTSBURGH INDUSTRIAL FINISHES

to make office equipment look better . . . last longer

FOR more than ninety years, Pittsburgh has given valuable assistance to users of industrial paints in solving finishing problems.

● **For instance,** Pittsburgh finishes help make office equipment and appliances better-looking and longer-lasting—typewriters, sound-recording and business machines, filing cabinets, water coolers, desks, chairs, desk lamps and metal receptacles of many kinds.

● **By working with** the technical and engineering staffs of the makers of these products, Pittsburgh has produced high-grade industrial finishes to meet any number of performance standards. Among these are a wide range of Lacquers for metal and wood, an equally wide variety of Industrial Enamels, to meet almost every general finishing requirement, and a series of Lavax Wrinkle Finishes for wood, paper, steel, metal castings, aluminum, plastics, etc.

● **These coatings** provide exceptional adhesion, toughness and durability. Because they are easy to apply and dry quickly, they speed production. These fine finishes add to eye appeal and also keep office equipment looking better for a longer period.

● **This broad experience** in providing tailor-made coatings of all needs to meet hard and fast performance standards can be helpful to you. Call on us for facts and figures.

PITTSBURGH PLATE GLASS COMPANY
Industrial Paint Division, Pittsburgh, Pa.
Factories: Milwaukee, Wis.; Newark, N. J.; Springdale, Pa.; Houston, Texas; Los Angeles, Calif.; Portland, Ore. Ditzler Color Division, Detroit, Mich. The Thresher Paint & Varnish Co., Dayton, Ohio. Forbes Finishes Division, Cleveland, Ohio. M. B. Suydam Division, Pittsburgh, Pa.

PPG **PITTSBURGH** *Industrial* **FINISHES**

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

KEMCLAD

KEMVAR

HEETCLAD

SUPERCLAD

TV LACQUER

DIMENSO

G. L. Hehl, General Manager
General Industrial Division.

"If the label says KEMVAR it will be KEMVAR!"

A statement of policy to users of Sherwin-Williams Industrial Finishes . . .

..for CIVILIAN production:

"To aid manufacturers in maintaining their finishing standards, Sherwin-Williams makes this statement of policy: "Restrictions in the supply of some of the quality ingredients of such well-known Sherwin-Williams industrial finishes as Kemvar, Kemclad and others may affect the *quantity* of such finishes that can be supplied.

"So long as these branded finishes can be supplied at all, however, no deviation in their *quality* will be permitted. "Users of such finishes can therefore be assured that if a label *says* KEMVAR, the material so labeled will *be* KEMVAR, as nearly unvarying in established performance characteristics, both on the production line and afterwards, as strict quality control can make it."

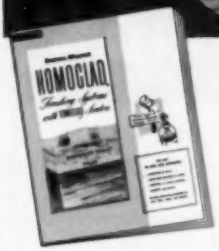
.. for DEFENSE production:

"The same integrity of product and appreciation of practical production problems is assured to users of Sherwin-Williams finishes for defense orders as for civilian requirements.

"Every effort will be made to furnish defense manufacturers with suggestions for making necessary change-overs to meet government finishing specifications accurately in spirit as well as letter, with least possible modifications of existing equipment."

Sherwin-Williams experience extending through two World Wars will be made available on any defense production problems, through facilities extending from coast to coast. Call, wire or write The Sherwin-Williams Co., 101 Prospect Ave., Cleveland 1, Ohio.

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES



Locks FINISH to FILLER

. . . cuts HOURS and DAYS off schedules!

Apply it over *wet* filler—this unique new sealer forms an interlocking bond between filler and top coats . . . creates a homogeneous finish literally "locked to the wood" . . . speeds up schedules by eliminating need for drying of filler before applying sealer!

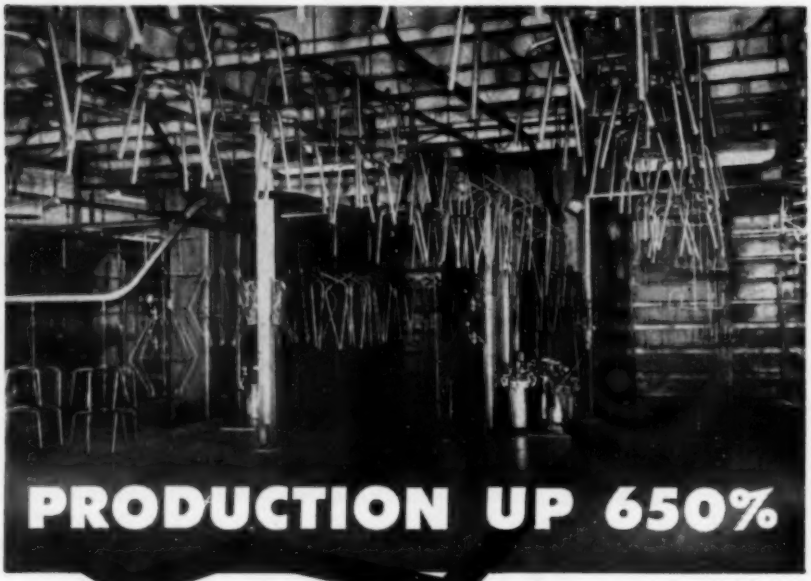
Sherwin-Williams HOMOCLAD Sealer opens the way to new and improved finishing systems using a choice of various Sherwin-Williams top coats. Its remarkable moisture-sealing properties make possible finishes with the ultimate in adhesion.

If you produce or finish furniture or wood products of any type, you'll want full information on this outstanding key to better, faster finishing. It's contained in the new Sherwin-Williams Bulletin H-104, illustrated, which describes HOMOCLAD, its applications and some of the typical faster finishing schedules it makes possible. Ask your Sherwin-Williams representative or write for a copy without obligation. The Sherwin-Williams Co., 101 Prospect Ave., Cleveland 1, Ohio.

This brochure tells how HOMOCLAD gives new and better

- ADHESION of finish
- MOISTURE-SEALING of wood
- CONTROL of veneer checking
- CLARITY and BEAUTY

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES



PRODUCTION UP 650%

Rate of production jumped 650% when one eastern manufacturer of metal furniture switched from hand spray to a conveyorized system and RANSBURG ELECTRO-SPRAY. The modern electro-spray process enables this manufacturer to do in a little over 2 hours what formerly required 16 hours!

ALSO ACHIEVED WITH THE RANSBURG INSTALLATION

- **PAINT SAVINGS**—60% reduction
- **LABOR SAVINGS**—4 men made available for other work
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Want to know what we can do for you? Ransburg engineers will analyze your specific painting requirements. No obligations, of course.

RANSBURG ELECTRO-COATING CORP.

Indianapolis 7, Indiana

RANSBURG

A NEW

NACROMER N. N. **is excellent for simulated Metallic Finishes.**

We recommend it to lacquer manufacturers as a formulated substitute for . . .

GUN METAL
GOLD
BRASS
BRONZE
COPPER AND
SILVER COATINGS

NACROMER N. N. **is Concentrated, Stable, Non-corrosive and low in price.**

Samples and literature sent on request

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153 WAVERLY PLACE **NEW YORK 14, N. Y.**

"World's Largest Producer of Pearl Essence"

The Truly **DEPENDABLE**

FINISHES and LACQUERS

for WOOD and METAL SURFACES

COAST LACQUERS cost less because we pass along to you the savings made possible by our immediate contact with the huge chemical plants of the Gulf Coast from which we obtain our superior raw materials at low cost. Write for information and prices on . . .

FURNITURE FINISHES **INDUSTRIAL LACQUERS**
GOVERNMENT SPECIFICATION COATINGS AND THINNERS

CPL

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WANT TO DOUBLE BELT LIFE?

New

"61"

CONTACT WHEEL

by CARBORUNDUM
TRADE MARK

will accomplish these things for you on *most* abrasive belt applications in the metal working field:

- Belt Life Greatly Increased.
- Increase Production Per Belt.
- Reduce Costs.
- Reduce "Down-Time"; Provide More Uniform Finish; Lessen Operator Fatigue.

LET US PROVE IT TO YOU!

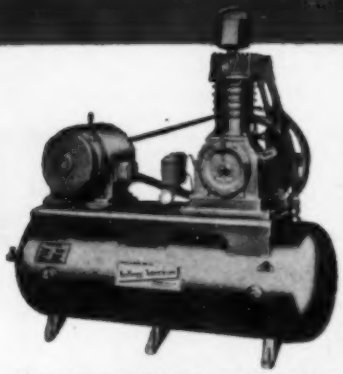
Ask your CARBORUNDUM representative for a demonstration of this new "61" Contact Wheel in your shop, on your present production line. Or write Dept. IF 82-113.

Only **CARBORUNDUM**
TRADE MARK

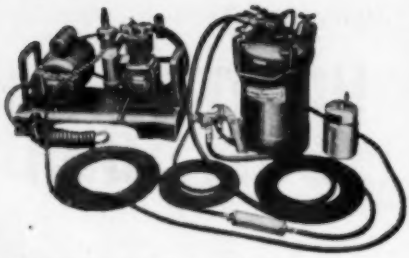
"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York

makes ALL Abrasive Products ...to give you the proper ONE

82-113



1. Air compressors for all applications.



2. Complete spray painting outfits for all applications.

5. Dry-type spray booths and all accessories.

6. The Steam-Spray gun and system for high-speed, production-line finishing.

Kellogg-American Paint Spray Equipment

PRODUCTION

A new answer to high-speed, production-line finishing is the Steam-Spray gun (No. 6 above). This gun was developed for use with the revolutionary du Pont steam spraying process. It enables you to use superheated steam in place of air to apply materials of higher viscosity in thicker films with one pass of the gun. You get coats surprisingly free from sags, popping and runs. You reduce the amount of solvents and thinners used. You cut overspray. You cut labor costs. Brake Shoe can supply the gun or a complete steam spraying system, as your requirements dictate.

The Micro-Spray gun (No. 3) atomizes paint exceptionally fine and distributes it exceptionally evenly, resulting in an extra-smooth, high-gloss finish of above average quality.

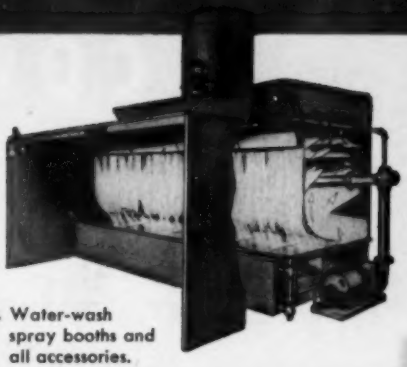
Over 100 air compressor models (No. 1) offer a range of choice that will provide the answer to your "on the spot" air problems.

Assembly-line spraying and other finishing operations are cleaner and

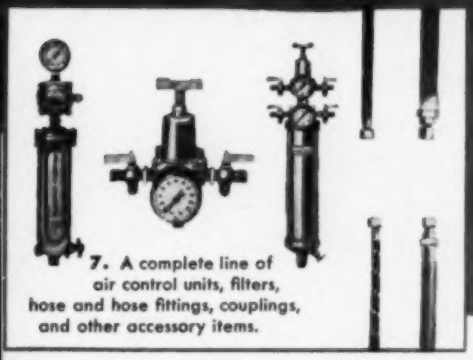
KELLOGG DIVISION, 94 HUMBOLDT ST., ROCHESTER 9, NEW YORK

Brake Shoe

3. The Micro-Spray, for extra fine quality finishing, and other spray guns.



4. Water-wash spray booths and all accessories.



7. A complete line of air control units, filters, hose and hose fittings, couplings, and other accessory items.

8. Special-purpose spray guns and outfits for heavy viscous materials.

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safer in the correct model of dry-type or water-wash spray booth from Brake Shoe's complete line (Nos. 4 and 5). Brake Shoe will build special booths any size to suit your particular requirements.

From compressors to Steam-Spray, from spray outfits to Visco-Spray, every product in the Kellogg line helps you solve your difficult finishing problems.

Mail the coupon today for detailed information that may save you hours of time, dollars of cost.

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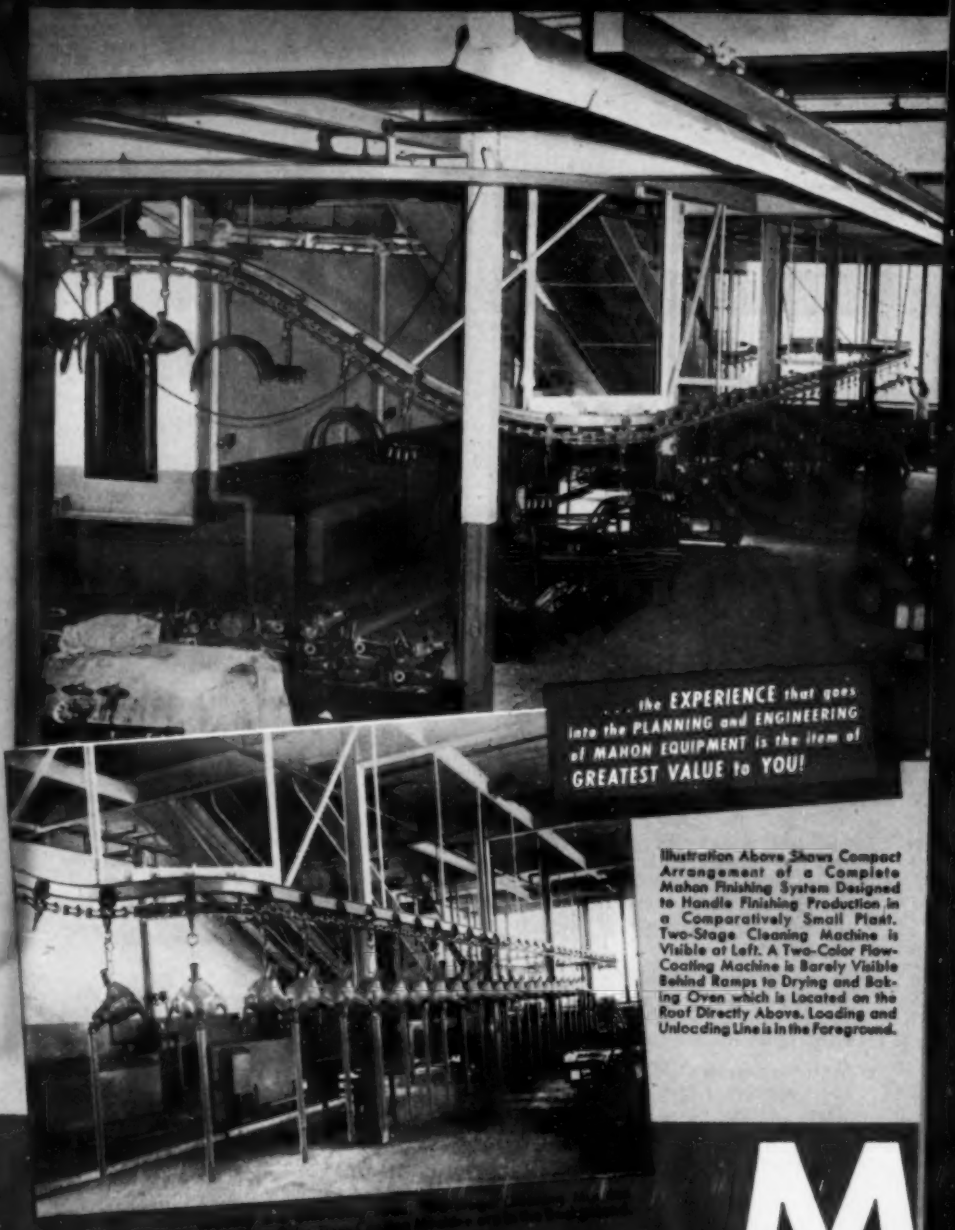

. . . the **EXPERIENCE** that goes into the **PLANNING** and **ENGINEERING** of **MAHON EQUIPMENT** is the item of **GREATEST VALUE to YOU!**

Illustration Above Shows Compact Arrangement of a Complete Mahon Finishing System Designed to Handle Finishing Production in a Comparatively Small Plant. Two-Stage Cleaning Machine is Visible at Left. A Two-Color Flow-Coating Machine is Barely Visible Behind Ramps to Drying and Baking Oven which is Located on the Roof Directly Above. Loading and Unloading Line is in the Foreground.

M

E

Finishing

SYSTEMS

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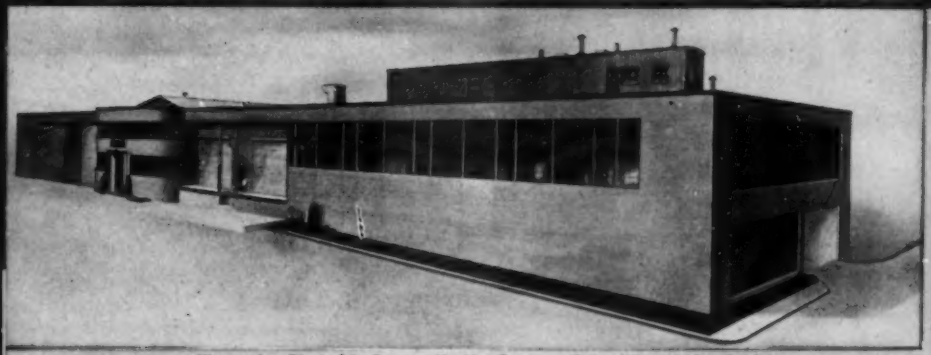

Ultramodern Plant of the Danuser Machine Company, Fulton, Missouri. Note Finish Baking Oven of a Complete Modern Finishing System is Located on the Roof.

Small Plant Operators, Too, CUT FINISHING COSTS with MODERN MAHON EQUIPMENT!

While the Mahon Nameplate appears on Finishing Equipment in almost every large automobile plant, household appliance plant, farm implement plant, road building equipment plant, and other large production plants in many industries throughout the country, it is singularly significant that so many comparatively small companies also pay a little more for modern Mahon equipment. The Danuser Machine Company, Fulton, Missouri, manufacturers of EARTH MOVING EQUIPMENT and FARM TOOLS, is a typical example. This company operates a Complete Mahon Finishing System specially designed to meet its specific production requirements . . . the completely conveyorized system consists of a two-stage Cleaning Machine, Dry-Off Oven, a two-color Flow-Coating Machine, and a Finish Baking Oven—the latter being an outdoor oven installed on the roof to conserve space within the plant. The owner of this plant is one of many small plant operators who have found that their finishing equipment requirements will receive from Mahon the same careful preliminary study, the same experience-backed planning and engineering that goes into finishing systems installed for the largest companies in the world—some of which run into millions of dollars. If you are contemplating new equipment, do not hesitate to call in Mahon engineers . . . you will benefit from a wealth of technical knowledge and practical know-how not available to you elsewhere. See Mahon's Insert in Sweet's Mechanical Industries File for complete information, or write for Catalog A-650.

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Engineers and Manufacturers of Complete Finishing Systems—including Pickling Equipment, Metal Cleaning and Rust Proofing Equipment, Dry-Off Ovens, Hydro-Filter Spray Booths, Filtered Air Supply Systems, and Drying and Baking Ovens; Core Ovens, Hydro-Foam Dust Collectors, Fog-Filters, and other Units of Special Equipment.

AHON

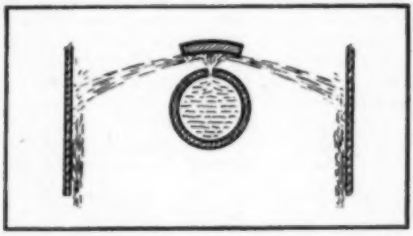
Here's why a BINKS Dynaprecipitor is your BEST spray booth buy!

Exhaust air washed 5 times: The paint and fume-laden air passes through 5 thorough washings before it is vented. This "wets down" and dilutes flammable vapors so much that they are harmless. All paint pigment is literally scrubbed from the air and is trapped in the water pan where it can be reclaimed. The vented exhaust is free of the paint that would otherwise unbalance the fan and coat the exhaust ducts or the exterior of the building.

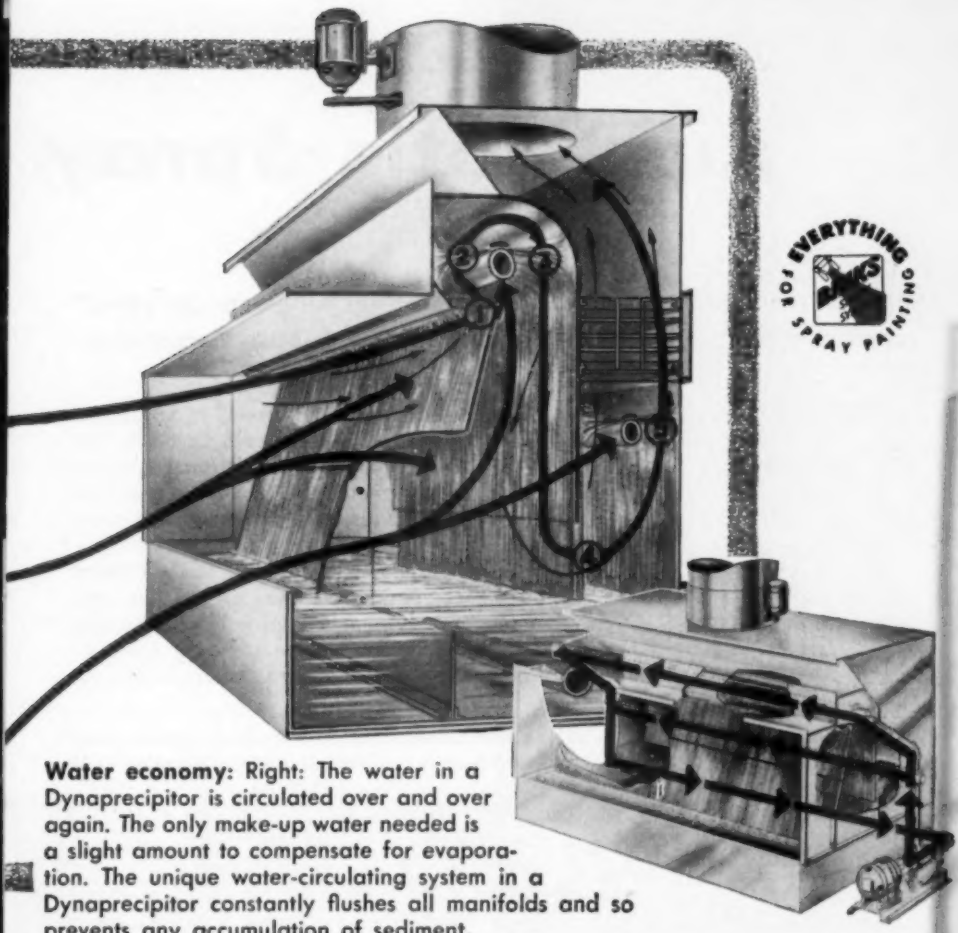
Dynaprecipitor stays cleaner much longer: All surfaces with which the over-spray comes in contact are constantly flushed. Pigment collects in the water.

Uniform distribution of large water volume: There are no breaks in the water curtains...no gaps in the air-washing spray. Because the water curtain is so complete, Binks Dynaprecipitor spray booths exceed code requirements for safe removal of flammable and toxic over-spray and vapors.

Faster production: The Dynaprecipitor Spray Booth removes over-spray so effectively that you can place spray stations closer to each other. This helps workers perform faster and no time is lost cleaning the booth or adjacent surfaces and products.



There are no nozzles to clog: This cross section drawing illustrates why water distribution is so uniform in a Binks Dynaprecipitor spray booth. Notice how the jets are fanned out into two unbroken curtains by the concave deflector plate.



EVERYTHING FOR SPRAY PAINTING

Water economy: Right: The water in a Dynaprecipitor is circulated over and over again. The only make-up water needed is a slight amount to compensate for evaporation. The unique water-circulating system in a Dynaprecipitor constantly flushes all manifolds and so prevents any accumulation of sediment.

All sizes and capacities: 148 standard sizes to choose from. Special designs to almost any dimension.

Write—without obligation— for Bulletin 500 for details about Binks Dynaprecipitor spray booths.

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Automatic Spray

Material and pictures for this final chapter on "Automatic Spraying" supplied through courtesy of Ransburg Electro-Coating Corporation.

ELECTROSTATIC Spraying—still an "infant" in the field of automatic spray painting — has made phenomenal strides since its introduction to industry some eight years ago.

In this highly developed method, the work is conveyed through a conventional type spray booth in which a high potential electrostatic field is created by an electrode system of fine wires arranged to surround the work as it travels through the booth. Conventional automatic spray guns direct paint into the electrostatic field around the work, where the atomized paint particles are charged electrically so that they bend toward and alight on the work, since the work is of opposite polarity by virtue of being grounded electrically through its holder to

Three automatic electro-spray units apply primer, color coat and clear coat to tubular metal furniture parts. Paint costs were reduced, and four men were made available for other work.

Painting..

(PART IV)

By P. C. BARDIN
Associate Editor

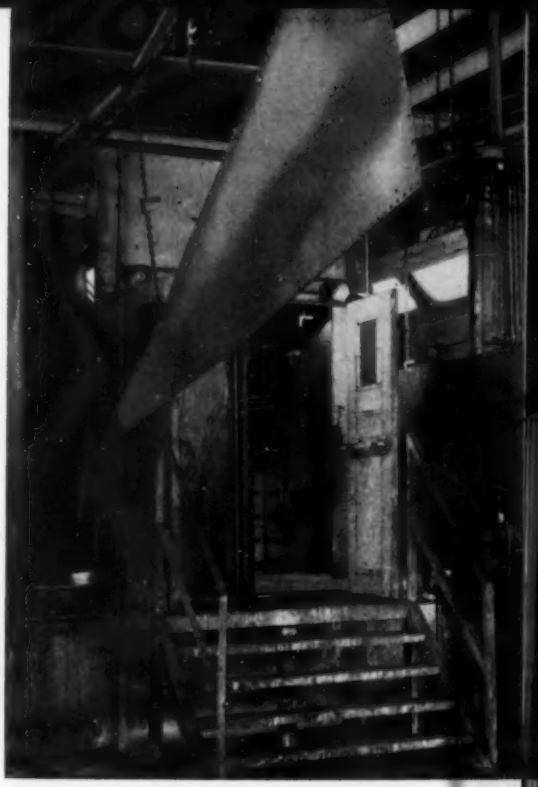
the conveyor. The net result is the deposit of almost all the paint on the work, with relatively little overspray loss.

Electrostatic Spraying Makes Paint Go Farther

Electrostatic spraying is best known for the savings in paint that it produces, averaging 50% of the material required by hand spray methods. Expressed another way, it makes paint go twice as far; or it paints twice as many articles per gallon of paint as hand spraying does.

In addition, it has earned a reputation for making possible the automatic spray painting of articles that were formerly considered impractical or too costly for conventional automatic spray painting. Several factors are responsible, as will be described in this article.

All of the skills of setting the automatic spray gun, in combination with various types of conveyors, workholders and spray booth enclosures, are employed to make electrostatic spraying a versatile production tool. Spindle, monorail, table top, belt, cross-bar, pusher, gravity, etc.—any of these methods of moving articles through the spray booth may be used. Stationary, reciprocating, pivoting, continuous or skip-spray, etc.—any of these methods of arranging or controling automatic guns may be used too.



Prime and finish coats are applied to these flat sections for bolted steel storage tanks, using two automatic electrostatic spray units.

Almost Any Material, and Any Type of Conveyor

The process is capable of handling nearly all types of coating materials, the main requirement being simply that the material lend itself to atomization at relatively low pressure (under 40-psi. atomizing air).

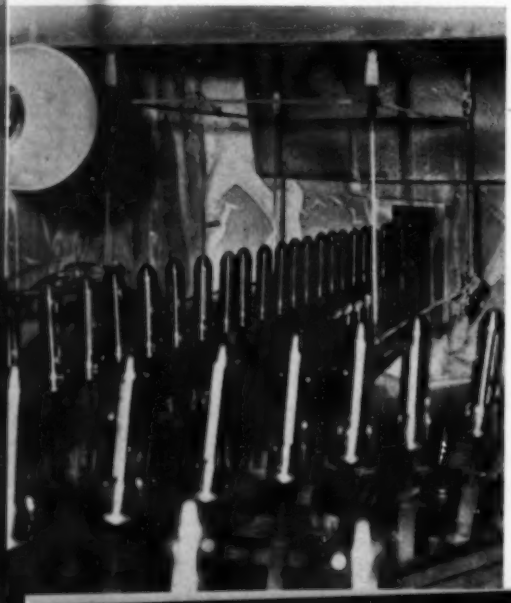
There is practically no limit to the speed or productive capacity of electrostatic spraying, as ordinarily

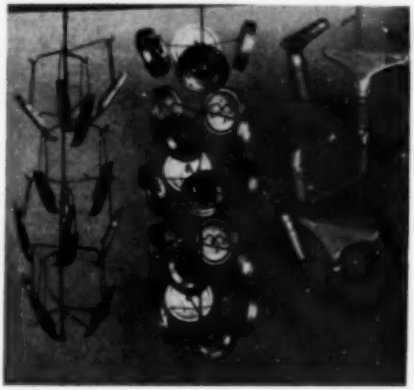
expressed in terms of conveyor speed. For example, 20-ft. lengths of pipe are being painted at production speeds in excess of 600-ft. per minute; and low production jobs may be run as slowly as 1½-fpm.

Fields of application are also practically unlimited. The process is being used on a vast variety of articles, ranging in size from cigarette lighters to steel sheets for prefabricated buildings.

Top quality finishing is evidenced by its wide acceptance for the clear coating of highly polished and plated articles, where the protective film must be invisible and where exacting inspection standards reject the slightest blemish. High quality of finish is also evidenced by an increasing use of electrostatic spraying for the painting of household appliances, metal furniture and business machines.

One gallon of paint coats 2800 flashlight tubes on this spindle conveyor spray setup.





Examples of how small parts can be closely racked for automatic electrostatic spraying.

It may be well to explain the main difference between electrostatic and conventional automatic spraying, since these features help to explain the merits of the electrostatic method.

Spray Guns Point Toward Line of Conveyor Travel

In a conventional setup, spray guns are usually directed at right angles to the line of travel of the work, as in hand spray operation. Paint is sprayed on each single article as the conveyor carries it past the spray station. "Overspray" material is lost.

Now, in an electrostatic spraying setup, such as I have in mind, the guns are pointed in a direction that is almost parallel to the line of work travel, introducing atomized particles at low velocity to the area between the work and the high potential electrode. Depositing the film of paint is accomplished mostly by the electrostatic field—not by the blast of the spray gun—because the

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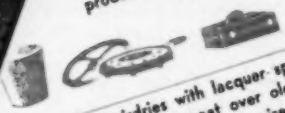
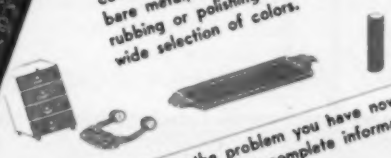


VARITONE airdries with lacquer speed; covers with a single coat over old finishes, bare metal, and wood. It requires no rubbing or polishing and comes in a wide selection of colors.



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electrostatic field imparts an electrical charge to the paint particles, making them attracted to the work in much the same way as iron filings are attracted to a magnet.

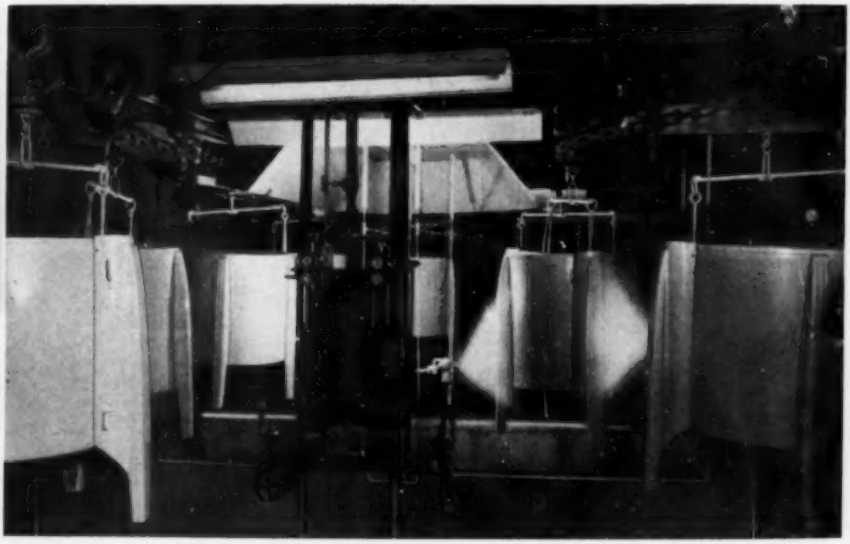
Instead of only one article being painted at a time, each article receives a continuous build-up of paint as it travels through the coating zone, with all of the articles in the zone receiving paint. Material that is "oversprayed" from the first articles is deposited on the second article, and the third, and so on with the final overspray loss being almost negligible.

Fewer Spray Guns Used; Multiple Work Holders

Usually, fewer guns are required because it is not necessary to point a gun at each different surface plane or area on the article to be coated. The "wrap-around" feature of charged particles of paint being deposited on the opposite side of the work often obviates the need of using additional guns. Gun arrangement may be thought of as covering a given work area served by the conveyor, rather than a specific area on the article.

Electrostatic spraying affords a flexible painting setup. A given gun setup may produce satisfactory results on a wide variety of shapes and sizes, without changing spray patterns or fluid delivery.

Multiple type or "Christmas Tree" style workholders are commonly used for small articles to fill up a given work area. Electrodes may be adjusted easily and quickly for a variety of sizes and shapes of work. Many users think nothing of changing gun positions, electrode settings, and color of paint as often as once or even twice an hour, since



Washing-machine shells being white enameled by electrostatic automatic spraying setup.

for volume finishing

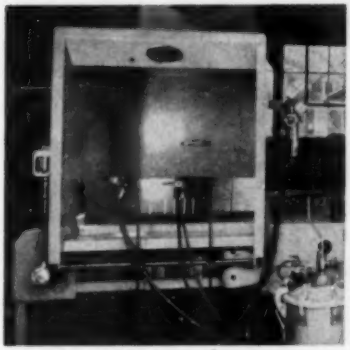
OF DEFENSE PARTS

CAPITOL HIGH SPEED

ELECTRIC SPRAY-BAKE

CONVEYOR MACHINE

It will accommodate pieces of from less than 1-in. diam. to over 12-in. diam., which require a high quality finish, such as shell noses, cartridges, weapon parts, also clocks, pens, pencils, door knobs, etc. Positioned on work holders, pieces are automatically sprayed, travel on through a drying chamber for solvent evaporation, and then into electric strip-heated bake oven from which they emerge for a cooling period before being removed.



View of booth showing automatic spray guns — lower view shows conveyor arrangement and drying and baking compartments.

Recommended for speedy, high quality production, and exceptional savings in coating pieces of various sizes and shapes that are difficult to handle.

LET US MAKE A TEST RUN OF YOUR OWN WORK SAMPLES— NO OBLIGATION.

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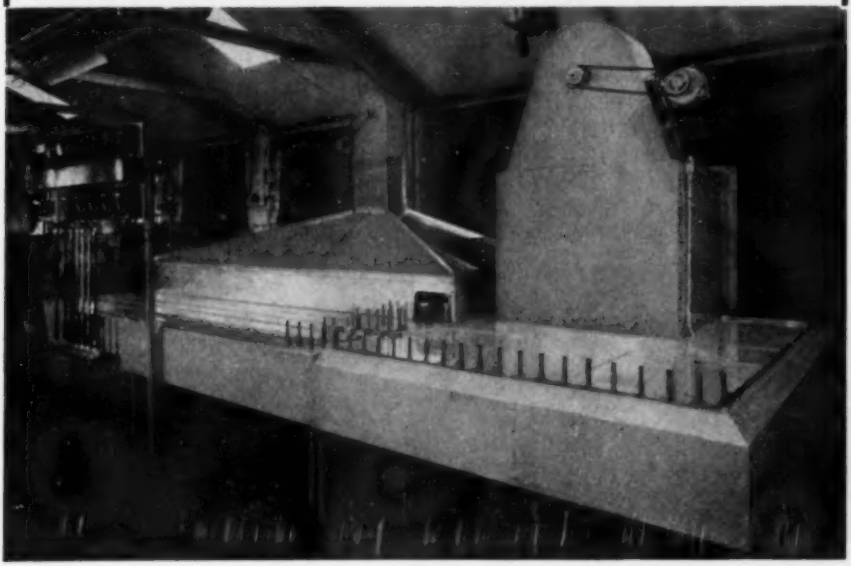
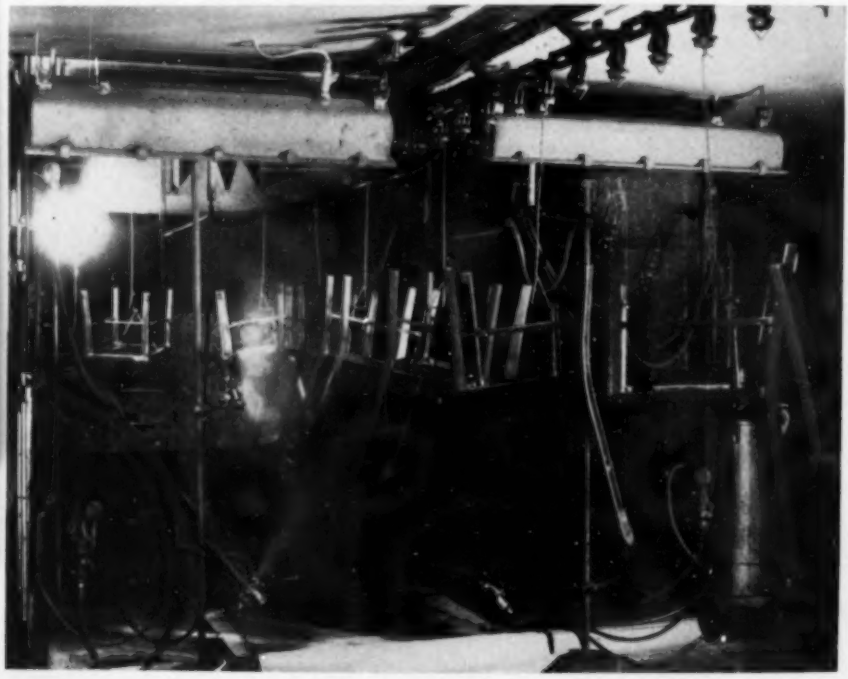


it can be done quickly—usually in less than five minutes. *High production of only one item is not a necessity for obtaining economy or efficiency in electrostatic spraying. It works equally well on a variety of shapes, sizes and colors,* as has been proved in many job shop applications.

It has been said that anything that can be sprayed by hand can be sprayed automatically—provided enough guns are used. This can be amplified by adding that almost anything that can be sprayed automatically can be sprayed electrostatically — and with fewer guns.

It is true that electrostatic spraying is limited to exterior surfaces and shallow recesses. Interior areas, deep narrow recesses and "shielded" surfaces cannot be painted adequately. It is therefore quite commonplace to supplement electrostatic spraying by hand spraying or conventional automatic spraying to reach "shielded" areas and interior surfaces, either before or after the electrostatic spraying operation. Fishing tackle boxes, lunch boxes, and tool boxes are examples of this type of combination.

Electrostatic spraying is particularly effective on certain types of



45% paint saving over hand spray operation—and labor requirements reduced from 12 men to 2—accomplished by one automatic electrostatic spray unit for these metal office chairs.

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KOCH STANDARDIZED TRUCK-TYPE BAKING OVENS

- Can be furnished in standard single unit or any multiples thereof.
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- Faster delivery. You get these standard truck-type ovens right off our assembly line.
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- Complete and ready to operate. All accessory equipment is included.
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articles that are generally considered difficult or too costly to paint by other automatic methods—for example, articles that have a large portion of open space, like chairs, lawnmowers, air-conditioning grilles and registers, heat exchangers and radiator cores, assembled tubular articles, metal furniture, automobile window frames, garnish moldings, etc. On articles such as these, the "wrap-around" characteristic of charged paint particles spells high efficiency.

The process is also satisfactory on articles of just the opposite characteristics, on solid flat or curved sheets, panels and cabinets, where the uniformity of paint film thickness is of utmost importance. Articles in this class include refrigerator and kitchen cabinets, lockers, metal wall partitions, doors and siding for dwellings.

Saves Labor, Paint and Spray Booth Maintenance

The main saving created by conventional automatic spraying is in labor and higher production. In addition to these savings, the electrostatic process, when properly installed and operated, saves paint, usually cutting the paint bill in half. Spray booth maintenance is reduced considerably, therefore the process can be justified for a wide range of production volume. According to a leading authority on electrostatic spraying, any conveyorized painting operation that requires the services of two or more hand spray men can usually justify conversion to electrostatic spraying because "it will show substantial savings in paint and labor, good quality, great production capacity".

The electrostatic method of automatic spraying, along with its companion process of electrostatic detearing of dipped and flow-coated articles, cut its teeth on military articles during World War II. Its merits were quickly recognized, and it won wide acclaim for the excellent job it did in increasing production and saving paint and labor. It is being used just as effectively today in the present Defense Program as well as for our civilian production.

Joseph C. Hager Appointed to OPA Committee

Joseph C. Hager, Vice-President of the Grand Rapids Varnish Corp., has been appointed as a member of the Paint, Varnish & Lacquer Industry Advisory Committee of the Office of Price Stabilization, according to word received from Michael V. Disalle, Director of the OPA. Mr. Hager flew to Washington to attend the first meeting of the committee on May 22, 1951.

Turco Appoints D. A. Keating R. R. Div'n Sales Mgr.

Turco Products, Inc, Los Angeles, Chicago, Houston, and Newark, manufacturer of industrial chemical cleaning compounds, announces the appointment of Donald A. Keating as Railroad Division Sales Manager.

A native of Phoenix, Arizona, and a descendant of an old-time railroad family, Don was educated in Los Angeles and received his B.S., in chemical engineering at Cal Tech. During the war, he served the Navy in amphibious operations.

Since joining Turco, five years ago, Don has served in the Chicago Division as Technical Representative for the Mid-West states, and in Los Angeles both as Process Engineer and Assistant Technical Department Manager, handling the direction of the development and control sections of that department.

ARMY-NAVY FEDERAL MILITARY specification finishes

For Government Specification Finishes, we offer high quality, accurate formulations — dependable materials that are backed by years of experience in protective coatings manufacture during World Wars I and II, as well as during the peace-time years of the last half century.

Keeping abreast of Government requirements, we are in position to formulate and supply finishes for every coating need in the Defense program. Regardless of your problem, write, wire or phone us for immediate action!

Also FINISHES FOR CIVILIAN PRODUCTION

Due to curtailment of vital metals in many industries, and the increasing demand for simulated gold, brass, copper and bronze finishes, Nikolas research has developed simulated finishes that only experienced eyes can distinguish from the vital metal . . . in both air dry and baking finishes, to meet virtually every need, for use on polished zinc or steel. Write, wire or call for information regarding these materials so vital in carrying on business as usual.

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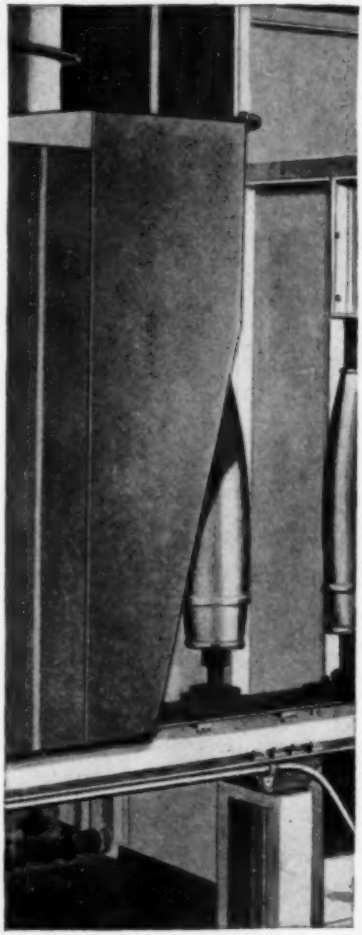
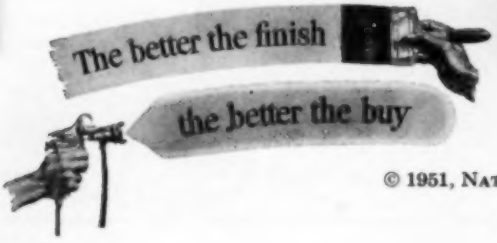
Special finishes, so necessary for civilian products, are even more vital for military equipment.

For instance, when production of shells was shifted from brass to steel, a special, thin, highly resistant finish was developed for protection against wear and corrosion. The finish had to be thin enough to clear the close tolerance of muzzle diameters, tough enough to protect against the elements and keep the shells in efficient firing condition.

Industrial Finishes Specialists, working with government experts, solved that problem, just as they solved so many other specialized production problems. There is a great reservoir of information in your Industrial Finishes Supplier's files. *Use it.* Consult your Industrial Finishes Specialist for any finishing problems—civilian or defense—that you might have. Remember . . . more and more of your customers *start buying with the finish in mind!*



Be sure to consult an Industrial Finishes Specialist!



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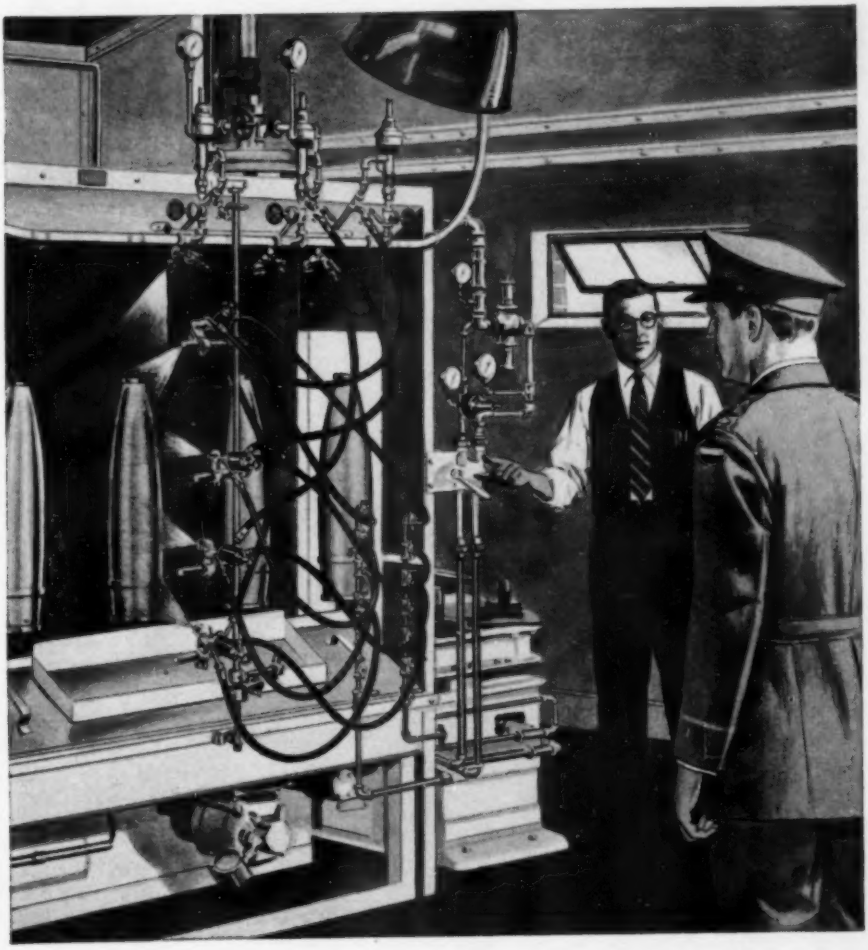
line of defense, too!



Painting Gasoline Station Pumps

By Walter Rudolph

GASOLINE STATION pumps are painted in bright attractive colors with a smooth glossy sheen—to give them that "come here" look—and this finish must be durable to a high degree. They stand outside exposed to all kinds of weather, subject to the hard wear of everyday service and to frequent contact with gasoline, kerosene, various lubricants and occasionally perhaps to spilled anti-freeze compounds.

Erie Meter Systems, Inc., Erie, Penna., supplies many nationally known firms in the petroleum industry, including Cities Service, Gulf, Humble, Kendall, Mid-Continent, Pennzoil, Shell, Skelly Oil, Standard, Socony-Vacuum and Tidewater. Erie pumps are also used in airports and commercial garages (bus lines, etc.) of many kinds, so naturally this firm has given considerable study to the problem of putting durable attractive finishes on its products.

The painting of Erie Meter equipment is on a production basis despite the fact that the parts to be painted are diversified and many operations do not lend themselves to complete mechanization. Roughly, we can gauge production by the fact that between 60,000 and 75,000 complete units are manufactured, painted and shipped annually; this output consists of gasoline pumps and various sizes of lubricating oil units.

Cabinet and Chassis; Four Factors Emphasized

The gasoline station pump, as we know it, consists chiefly of two essential parts—the cabinet and the chassis. The cabinet is what meets the eye at any gasoline station. The

panels of one unit comprise about 30-sq. ft. that must be painted. Erie Meter emphasizes at least four factors in painting its pumps:

First, the paints are under constant study and development by nationally known paint manufacturers who are striving to improve them in quality, ease of application and economy for the user.

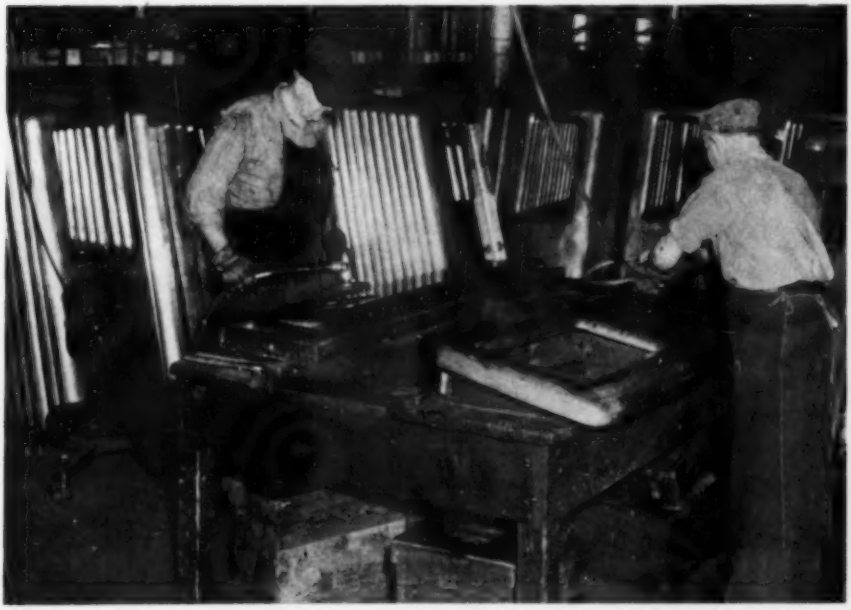
Second, metal cleaning and surface preparation are meticulously performed on all parts to clean and rustproof them in such a way as to insure lasting adherence of the paint.

Third, Erie Meter has experimented to work out a satisfactory baking operation on all cabinet pieces—one that insures a smooth, bright, lustrous appearance with maximum durability for the paint.

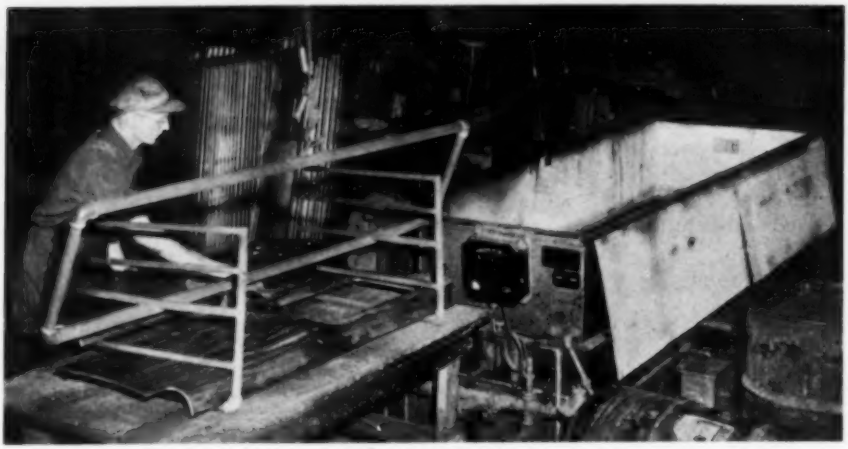
Fourth, the internal or chassis parts get two coats of rust preventive primer during assembly operations to insure protection even under bolts and where metal edges meet.

Surface Preparation; Smoothing by Power Sanding

Surface preparation includes a careful smoothing out of weld marks and any distortions caused by welding during fabrication of cabinet parts. Bends and indentations in the sheet metal are hammered out; portable electric disc grinders or sanders are used to cut down and smooth out any projec-



Smoothing the formed sheet metal panels—first with a portable disc sander (at left) and then with a reciprocating stroke sander, the latter being driven by compressed air.



Formed sheet metal panels are placed in a special rack, hoisted into the air, and then let down into the degreasing tank; this takes care of the "heavy cleaning" operation.

tions or irregularities. After disc sanding, portable electric reciprocating sanders are used to remove the swirls in the metal caused by rotary motion of the abrasive disc. After this mechanical smoothing, the panels are wet sanded by hand with No. 120 grit paper which is dipped in solvent and rubbed over them.

Degreasing; Rustproofing; Rinsing; Blow-off; Gloves

In the degreasing operation the parts are placed in special racks to prevent one part from touching another. The vapor type degreasing gets into places that are not accessible to manual cleaning. The degreasing solvent is flowed on some pieces for best results. After removal from degreasing, pieces are manually wiped with clean rags to remove any slight residue or stains that may remain after cleaning.

Erie Meter has tried several times to mechanize the degreasing and subsequent washing and rust-proofing operations, but to no avail. It seems that quality could not be maintained without some hand work. Accordingly, many pieces are hand-loaded on special hooks and hung in the rust-proofing tank. There is a five to six minute cycle, in and out of the rustproofing solution. Hot water rinsing (about 160° F.) follows. Water circulates constantly through heating coils in the side of the rinse tank to maintain proper temperature. This rinsing follows the same five to six minute cycle that is maintained in the rust-proofing setup.

Immediately after removal from the rinse tank, each piece is blown dry with compressed air so that no traces of moisture or water streaks remain to mar the painting job. Pieces are carefully hand wiped

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MIL-C-5541 (see also QPL-5541-1)	Lyfanite
MIL-S-5002	Lyfanite
MIL-C-10578	
Type 1	Metalprep Nos. 77, 102—Alumiprep No. 1
Type 2	Metalprep Nos. 10, 15—Alumiprep No. 20
JAN-C-490—Grade II	
Type 2	Emulsoprep
Type 4	Metalprep, Prep-Pik-L, Alumiprep, Prep-Rite
Type 5	Metalprep, Alumiprep, Prep-Pik-L, Prepwash
Type 6	Emulsoprep No. 710-E.C.
U.S.A. 3-213	(See MIL-C-10578)
U.S.A. 3-192	Metalprep Nos. 28, 10, 15 Alumiprep No. 20
U.S.A. 98-20007	Metalprep Nos. 10, 15 Alumiprep No. 20 Prep-Rite No. 16
U.S.A. 72-53	(See AN-F-20)
AN-F-20	Lyfanite
	Metalprep Nos. 10, 15, 77, 102 / Alumiprep Nos. 1 and 20 — See MIL-C-10578
AN-E-19	Lyfanite
AN-C-170	(See MIL-C-5541)
TAC-ES-431	(See MIL-C-10578)
AXS-1245	(See JAN-C-490, Grade II)
Engineering Corps—T-1184	Metalprep No. 28
U.S.N.—Appendix 6	Metalprep

51-C

Send for Data Sheet • Advise Govt. Spec. Number

NEILSON CHEMICAL CO.

2682 Tecumseh Rd., Windsor, Ont. — 6562 BENSON ST., DETROIT 7, MICH. — 3411 Union Pacific Ave. Los Angeles 23, Calif.

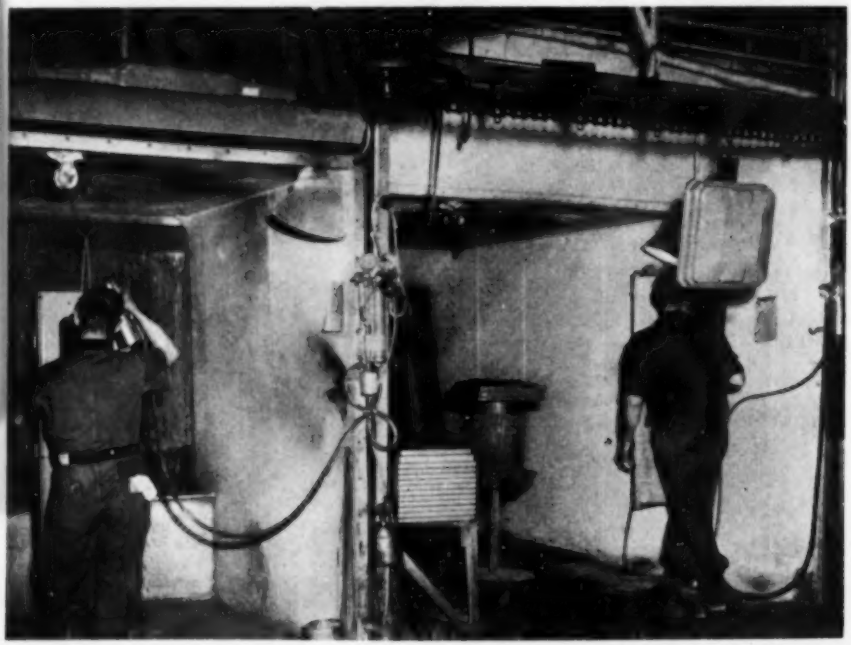
and from then on they are handled only by gloved hands so that no perspiration will contact the metal surfaces.

Just before painting, all panels are wiped with tack rags to insure a perfectly clean dust-free surface. Racked pieces are moved to a battery of three spray booths. After being painted they are hung on an overhead chain conveyor that follows a rectangular course through infra-red baking and cooling and to an unloading station near the assembly line.

The interior side of each cabinet panel gets one coat of primer. The exterior painting of cabinet panels is done with four series of passes with a quick-setting synthetic enamel; passes with the spray gun are across, up and down, across, and up and down. Paint is applied at room temperature which is about 70° F. or more.

A few feet from the spray booths, the painted panels enter an infra-red oven, by conveyor. Moving at the rate of about two feet a minute they require just about seven minutes to move through the oven.

Always striving to improve quality, the management has made tests by putting a thermocouple through a hole in a cabinet piece to study the speed and range of heat on individual pieces, using different combinations of infra-red bulbs. It has been found, for example, that with a certain red paint, the panels are



An overhead chain conveyor serves two spray booths where pressed metal parts are painted.

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ONE SOLVENT IS ALL YOU NEED

Blakeslee SOLVENT VAPOR DEGREASERS are more economical more efficient—USE LESS SOLVENT

NIAGARA
Metal Parts Washers for use with cleaning compounds on either batch or production jobs.

HIGHEST STABILIZED DEGREASING SOLVENT—NOT ALKALIZED!

BLACOSOLV contains the finest and toughest stabilizers to prevent solvent breakdown. You need not pay premium prices for special solvents for different metals. Blacosolv can be used over and over, under the most rigorous conditions, without impairing its high qualities.

G. S. BLAKESLEE & CO.

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heated to a temperature of 260° F. in 6½ minutes, while with black paint, 300° F. was reached more quickly; so the conveyor speed was increased, to shorten the baking interval. It was learned that the most universally applicable arrangement of infra-red bulbs is as follows:

At the oven entrance, a vertical bank of 250-watt bulbs six deep; then two rows of 250-watt bulbs, at top and bottom of oven, with all 125-watt bulbs in between. Total bulbs are 204 of 250-watt rating and 192 of 125-watt rating, with a total kilowatt consumption of 75.

Two-Tone Paint Jobs; Masking; Lettering

Sometimes 2-tone painting is specified by a customer. This brings up another point about paint formulation by manufacturers; all of the paints used can take two bakes. For a second coat application, masking paper and tape are used as required. Glass panels are painted or lettered outside the plant, but lucite panels are silk-screened, as needed, in the plant.

Chassis parts, as well as lubrication and grease unit parts, are extremely diversified as to size and shape; some of these are painted by spraying; others by dipping. Here again, mechanization and conveyorization through painting operations (as well as prior cleaning) have been tried but found to be not especially applicable to Erie Meter's needs.

Some specially-built racks, mounted on caster trucks or dollies, are used for handling certain units in and out of the spray painting setup

Portable racks hold small parts that are brought to and taken from these two spray booths.

Confidence

helped build this famous finishing name

The deep rooted confidence thousands of manufacturers have in Egyptian's ability to solve most any finishing problem tossed in their lap... was earned by doing just that... consistently coming up with the right answer in seemingly impossible situations.

Whether you seek a finish to add life and durability to your product, one to perk up sales appeal, a finish that may reduce production costs, or a formula to fit some particular need, as is required in vital defense work ...it will pay you to call in an Egyptian Sales Technician.

Put Egyptian Know-How to work on your next finishing "Tuffy." It won't be long before your name will be added to the long list of confident manufacturers who know "It's Better Because It's Egyptian."

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THE EGYPTIAN LACQUER MFG. CO.

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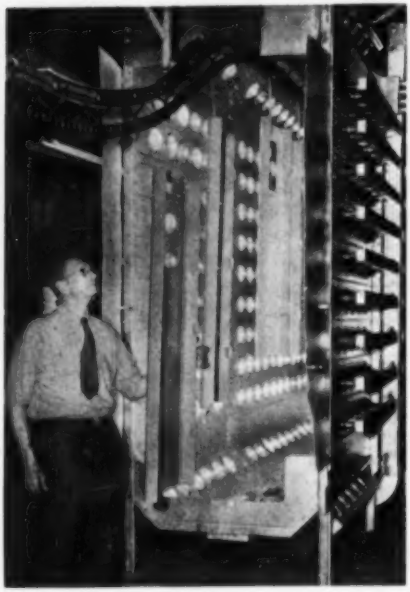
Plants: South Kearny, N. J. • Lafayette, Ind.



Paint is baked as freshly painted parts travel through this infra-red oven.

and through the steam-heated drying tunnel (180° F.). Larger units are placed right on the slat-bottom floor conveyor of the drying oven which is 50-ft. long. The conveyor is moved as required for loading or unloading.

Chassis Parts Dip Coated; Sprayed on Assembly Line

Fittings and the manifold on pumps are dipped in a special paint that is highly resistant to solvents and rust. The second coat (painting with rust preventive paint) is sprayed on chassis parts on the assembly line. Erie Meter has built special circular spray booths at intervals along the assembly line. Each spray booth is manually revolved around a station pump chassis as the operator sprays the chassis from different sides.

Colored stripes, when required, are applied by decals along the assembly line. Trim and panel pieces are stored along the assembly line in special wooden racks that will not scratch or mar the high-gloss finish on all cabinet pieces. Erie Meter maintenance men made wooden racks for this special purpose.

P.P.G. Co. Opens New Plant in Torrance, Calif.

The Pittsburgh Plate Glass Co.'s new $1,250,000 plant was formally opened in Torrance, Calif., on May 16. Located about 15 miles from downtown Los Angeles on a triangular 15-acre site, fronting on Crenshaw Boulevard, the plant is equipped to produce a complete line of house paints, varnishes, resins, industrial and automotive finishes.

An ultra-modern plant in all respects, all working areas throughout the plant and office buildings are painted according to the Pittsburgh Principles of Color Dynamics for Industry. The physiological and psychological factors of color energy are utilized scientifically to promote attractive surroundings which provide maximum efficiency as well as pleasant working conditions.

Pittsburgh Plate's new Torrance operation will be under the management of A. D. Wagen, West Coast divisional director for the firm.

In addition to the Torrance plant, Pittsburgh Plate Glass Co. operates paint and varnish plants at Milwaukee, Cleveland, Detroit, Dayton, Houston, Newark, Pittsburgh, Portland, Oregon, Springdale, Pennsylvania; and four subsidiary plants in Canada.

National Chemical & Plastics Co. Adds N. Y. and N. C. Salesmen

The National Chemical & Plastics Co. of Baltimore, Md., manufacturer of lacquers and lacquer products, announces that Sam Raichstat has joined its sales force and will represent the company in New York and the metropolitan area. Mr. Raichstat is well known in the lacquer industry and has a thorough knowledge of lacquer products gained through years of experience. He resides at 1998 Morris Ave., Bronx 53, N.Y.

C. F. Schriegel will represent the company in the Southern Territory. Mr. Schriegel is also well known in the industry. He can be reached at P. O. Box 1171, High Point, N.C.

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SO QUICKLY RESPONSIVE
SO ACCURATELY CONTROLLED at
SO LITTLE COST

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ANY HEATING OR DRYING APPLICATION (Up to 650° F.)
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1. No wiring in high heat zone.
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3. *Low Thermal Mass* inside insulated enclosure means quick on-and-off heat response.
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5. Long-life radiant CALROD* heaters. Plug-in, lock-in. Standard makes, voltages, sizes.

*REGISTERED U.S. PATENT OFFICE

Heat capacity: 4 to 40 kw. at 800 to 8000 BTU/hr/sq. ft.

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—as easy as this:

Heater panels are field assembled on standardized interchangeable frame members, which also house the electric wiring; Makes later changes in size, production capacity, or heating cycle a matter of inserting or rearranging readily available standard parts.

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- Insulated
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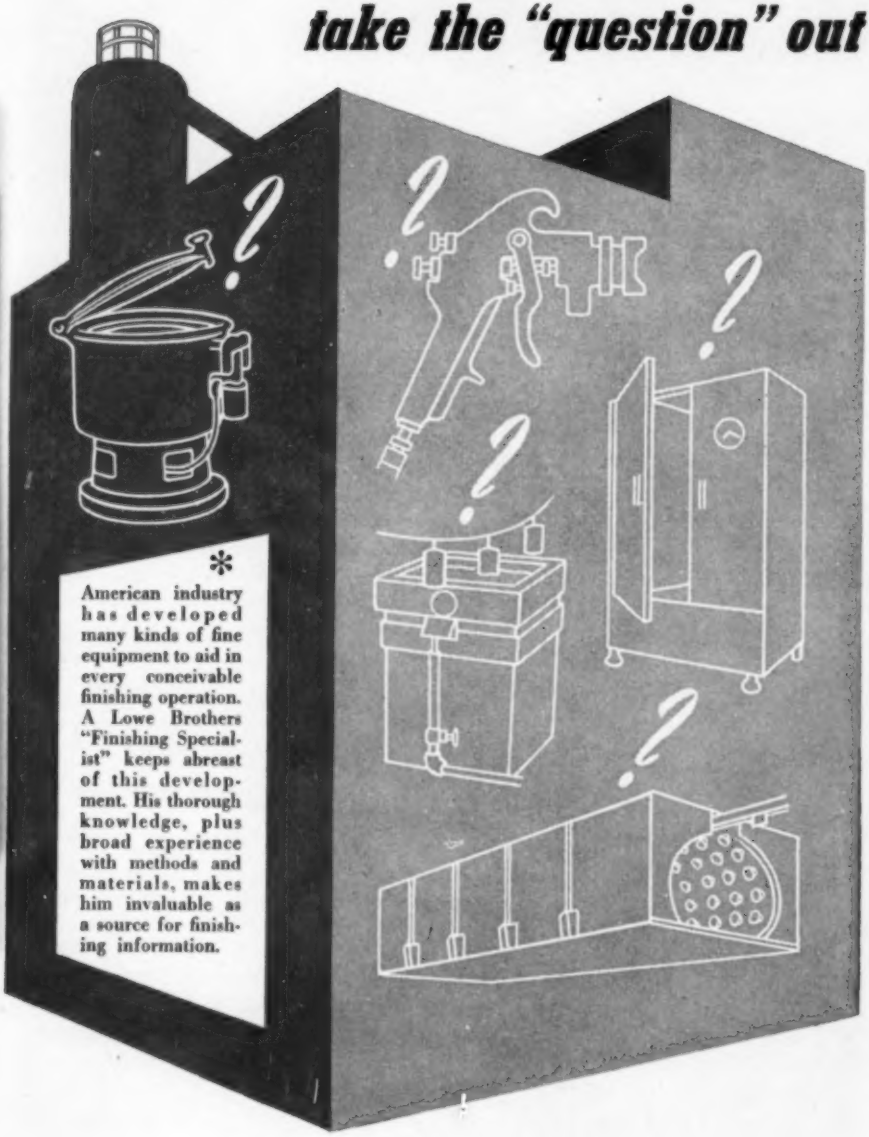

*

American industry has developed many kinds of fine equipment to aid in every conceivable finishing operation. A Lowe Brothers "Finishing Specialist" keeps abreast of this development. His thorough knowledge, plus broad experience with methods and materials, makes him invaluable as a source for finishing information.

"FINISHING SPECIALISTS"
of finishing system investments

Where do you begin and where do you end when setting up a system for finishing a new product? A Lowe Brothers "Finishing Specialist" is your dependable source for the *right* answers to questions concerning equipment investments in your finishing department.

Today, there are literally hundreds of different kinds of finishing department equipment you can buy. Unless you are fully familiar with the very latest finishing methods and materials, it would be wise for you to consult a "Finishing Specialist" as well as the equipment manufacturer when setting up a finishing system. Then you will be sure to install the type of equipment which will do your particular finishing job best.

A Lowe Brothers "Finishing Specialist" *knows* from current experience the proper types of equipment,* methods and materials that will meet *your* requirements most economically and assure best finishing results.

Countless manufacturers have benefitted immeasurably from having a "Finishing Specialist" analyze their complete finishing operation and offer recommendations based upon his sound, up-to-date knowledge of equipment and materials. No obligation for this service. Write for details today.

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Lowe Brothers
FINISHES FOR INDUSTRY

Durable Organic Coatings PINCH HIT FOR SCARCE METALS

Brass, bronze, gold, copper and chromium are closely matched with smooth lustrous coatings that are capable of withstanding severe tests and service.

BY B. F. AMES
General Sales Manager
Maas & Waldstein Co.

CURRENT limitations on availability of a number of nonferrous metals for civilian use have posed many new problems for the finishing industry. Plating shops are faced with the difficulty of getting the brass, copper, nickel and chromium they need to keep their production lines running. Paint shops and finishing departments are being asked to simulate the appearance of many metals formerly used for fabricating purposes, and for plating, but now in short supply.

Intensive research on organic coatings, covering both new studies on the durability of existing finishes and the development of new ones, points the way to a solution of these problems.

Finish Coatings Meet Many Severe Tests

One particularly critical problem confronting the plating industry today is the shortage of chromium —or where the chromium is available the unavailability of the copper and nickel which are normally used for plating substrate and which contribute so materially to the durability of the final coating of chrome.

One of the leading independent laboratories recently undertook a comprehensive program of testing organic finishes, to determine whether any of them could provide, for zinc die castings and zinc plated steel parts, the service durability normally supplied by the copper-nickel-chromium plating system or by brass copper and bronze parts. A representative group of coatings (all of the clear type, since the major objective of the program was to approach the durability of chromium using passivated, bright zinc parts, and also to simulate its appearance) were subjected to the following severe tests:

1) 800 hours of exposure to salt spray and weatherometer tests.

2) 48 hours immersion in water.

3) Cold check test, following salt spray and water immersion. This test consisted of subjecting the coated parts to temperature of

HOT Lacquer NEWS

PUBLISHED PERIODICALLY BY HERCULES POWDER COMPANY IN THE INTERESTS OF BETTER FINISHES AND FINISHING

Douglas Cuts Finishing Time in Half By Using Hot-Spray Lacquer

New Process Adopted for Production of Navy Aircraft at El Segundo, Calif.

Douglas Aircraft Company (El Segundo Div.) has adopted hot-spray lacquer for finishing of many metal parts, including aluminum, at El Segundo. Use is growing steadily, because of savings such as these:

Time-saving equivalent to 27½ hours in finishing AD-4 airplanes.

Booth time cut from 27½ hours to 18½ hours with present crews and equipment.

Equivalent of 2 gallons of lacquer and 8 gallons of thinner saved per plane.

Hot-spray method, with only one coat, removes hazard of sanding through the first coat of lacquer on rivet heads and skin laps.

The conclusions which led Douglas to use hot-spray lacquer for Navy production, based on thorough tests, were:

1. Required film thickness can be applied by one hot cross coat where two cold cross coats are necessary.
2. Salt spray and weatherometer tests show the hot sprayed film to be superior.
3. Smoother and glossier appearance.
4. Eliminates sanding between coats.
5. Affords maximum uniform film thickness over rivets and seams, by elimination of scuff sanding, thereby giving better protection in service.

This AD-4, built by Douglas for the Navy, is one of hundreds on which hot-spray lacquer based on Navy Spec. 52L26 (Aer.) is used to cut finishing costs and time.

6. Reduces application time 50% with a resultant increase in production.
7. Saves materials by less over-spray and less solvent required.
8. Has better flow-out and decreases tendency to sag, blush or orange peel.

FREE BOOKLET ON MILITARY LACQUER

Hercules offers a new booklet, "The Case for Lacquer in Military Procurement," which summarizes the progress made in lacquer since World War II. It is designed to help you evaluate modern nitrocellulose lacquers as a protective coating for military production. Send for your copy today.

HERCULES POWDER COMPANY
INCORPORATED
Cellulose Products Department
928 Market St., Wilmington, Delaware

CL51-3

175°F. for 24 hours, then transferring them to temperatures of -40°F. for a period of seven hours.

4) An additional cycle of 800 hours of salt spray and 48 hours of water immersion was conducted to reveal any microscopic film ruptures caused by the preceding cold check test.

Two of the various finishes which withstood the rigorous tests included an air drying type and a clear synthetic baking finish.

While the primary purpose of the tests was to find an organic coating to replace parts fabricated from or plated with brass, copper, bronze, nickel, and chrome, other studies indicate that these two finishes are equally desirable as a protective coating on chromium plated directly on copper, or chrome plated directly on steel.

The finishes just mentioned meet exacting requirements where service durability is the major consideration. They make it possible for manufacturers and plating shops to switch over from government restricted plating materials to the use of organic coatings.

Coatings for Appearance; For Compacts, Lipstick Cases, etc.

In such products as lipstick cases, compacts, builders' hardware and lamps, the public has come to expect the familiar colors of brass, copper or simulated gold effects obtained through the use of electroplating. This problem, too, has been solved by using organic coatings.

Some of these transparent enamel coatings are formulated on the clear vehicles whose tests were referred to previously, and thereby retain the exceptional durability of that clear lacquer and the clear baking synthetic.

The addition of carefully selected and controlled transparent enamels, that closely simulate the appearance of brass in any of its shades, copper or gold, offers many industries a solution to their problem.

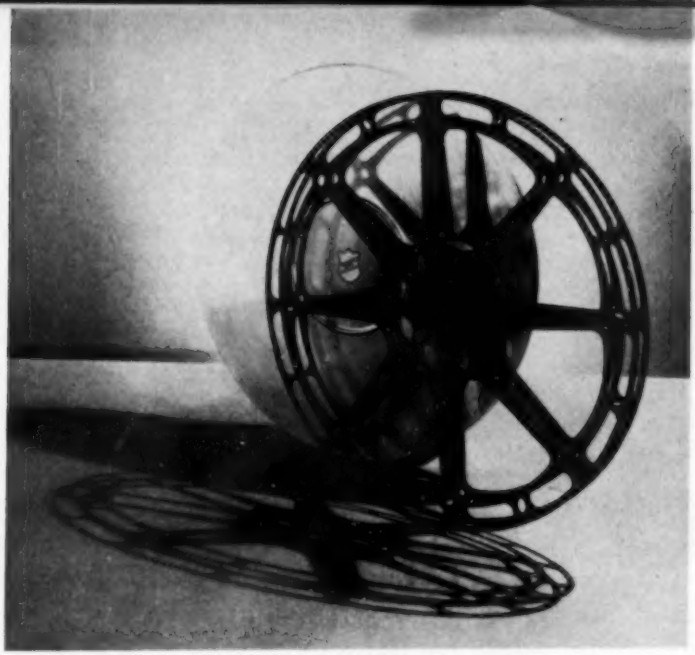
Studies on the application of these lustrous finishes to zinc die castings, zinc or silver plated steel, carried on jointly by the many industries including the automotive industry and certain research and development laboratories, indicate that one of the suggested methods of procedure is:

1) Buff the zinc die casting or steel to a high finish.
2) Flash-coat with bright zinc.
3) Passivate the surface.
4) Apply desired luster finish.

Another product of research has shown interesting possibilities where it is desired to approximate both the appearance and the durabiilty of chromium directly on steel. Because of shortages in certain raw materials, this particular finish may not be available for production purposes for some time, although it may be possible to supply samples in test quantities.

While the immediate objectives of these research studies on organic coatings has been to assist industry in meeting current problems of metal shortages, it is believed that they offer to both plating shops and manufacturers' finishing departments a means of diversifying their activities in the future—a means of turning out, at moderate cost, products that combine salesworthy appearance with service durability.

production
managers
know...
there's no guess when it's a finish by...
STANDARD



Finishing Movie Film Reels

Cleaning, phosphatizing and rinsing in wire baskets; drying by compressed air; spray painting automatically; drying in an infra-red tunnel; final inspection and checking for alignment.

BY RALPH JONES

Organic Finishing Foreman
Bell & Howell Company

THERE IS MORE to the manufacture of movie film reels than meets the eye. These reels are precision products, made of hard temper, cold-rolled steel to provide strength. The steel has a special flatness tolerance. Reel flanges are specially processed; all corners are rounded off to present a smooth uniform surface.

Film reels are used by the home movie enthusiast, for industrial pictures and for professional movies. The various film widths are consistantly uniform, therefore the space between the two flanges of a reel must be controlled to close tolerances. Automatic spray finishing of film reels aids materially in controlling the uniformity of the paint film thickness to one mil.

Surface preparation begins when batches of film reels are loaded into wire baskets to be lowered into the trichlorethylene vapor degreaser. Next they are dipped into a cold oxalic acid solution to neutralize any alkali that may remain in seams and close places. Alkali is used in

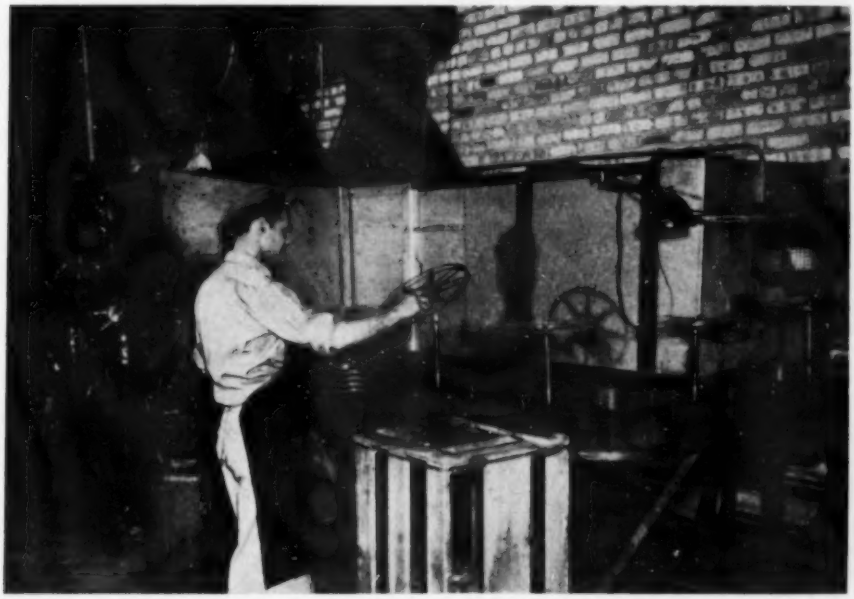
the tumbling barrels where reels are deburred before they enter the finishing room.

The clean reels are dipped in a phosphatizing solution which is heated to 180° F.; next comes a cold water rinse. The final preparatory operation is to dip the reels into a chromic acid solution which is heated to 180° F. Reels are then removed from the wire baskets, blown dry with compresed air and stacked in partitioned containers.

Automatic Spray Painting And Infra-Red Baking

Through the automatic spray painting setup and infra-red oven, each reel rests on an extended verticle spindle which is carried along by a chain-on-edge type of conveyor, as shown in the accompanying illustrations. Hollow-sleeve spindles, with suitable work holders to support the reels, are slipped over the extended vertical pins at regular centers along the conveyor chain, depending upon the diameter of the reel. Reel diameters vary according to the capacity of the reel which may range anywhere from 200 to 2000-ft.

As a loaded spindle enters the first spraying zone, the reel is mechanically rotated four times in front of fixed spray guns; it continues to revolve through the second spray zone. The number of fixed spray guns used depends upon the diameter of the reels being coat-



Where reels are placed on work holders of traveling spindle automatic spray machine which appears at left. Infra-red drying tunnel is at rear; unloading station is at extreme right. Note the type of box (in foreground) in which reels are stacked before and after finishing.

ed. For instance, four guns are used on 200 and 400-ft. capacity reels—two on top and two on the bottom. For 800-ft., 1200-ft. and 1600-ft. capacity reels we use a 5-gun setup—two for the top, two for the bottom, and one is adjusted to spray horizontally between the two flanges. For 2000-ft. capacity reels six guns are used, three each for top and bottom.

The coating material we use is a brown, semi-gloss lacquer of 30% solids, sprayed at an average atomizing pressure of 50-lbs. and a fluid pressure of 12-lbs. I say "average" because these pressures are slightly reduced for the smaller diameter reels and increased on larger reels.

Reels are mechanically rotated as they pass through the infra-red drying tunnel for two minutes at a temperature of 150° F.

As painted reels leave the spraying zone there is a flash (air drying) period of about half a minute before they enter the infra-red oven where they are again rotated as they travel through. Oven heat is 150° F. and the time in oven is two minutes.

Final Inspection and Aligning Operation

Finished reels are removed from the spindles at the unloading station and stacked in partitioned containers to be taken to final inspectors and aligners. Here the finish is inspected as each reel is mounted on a horizontal spindle on which it is revolved while the edges of the two flanges ride in metal guides. This test assures perfect alignment which is so necessary for satisfactory performance on the projector.

Paul Sharpe Represents Dolan in N. Carolina and Virginia

Mr. Paul L. Sharpe, 2111 Abernathy St., Lenoir, N. C., has been appointed as a sales representative of the V. J. Dolan & Co., Inc. He will be associated with Mr. E. W. Holton, who has been with this company for 20 years in the North Carolina and Virginia territory.

Mr. Sharpe assumed his duties May 15th. He is well known to the trade having represented other industrial finishes manufacturers in that territory and is well qualified for his new assignment.

Fire Fighting Demonstration

The most extensive fire fighting demonstration ever presented by an extinguishing equipment manufacturer was given last month at the Walter Kidde Proving Ground, Belleville, N. J. The educational show was presented in an attempt to reduce the staggering annual fire losses in the United States, which last year consumed an estimated $770,000,000 of property and killed 10,000 people. Records of these losses indicate that the majority of them could have been avoided with the observation of common rules of maintenance, proper extinguishing equipment.

Look, Mom! I Can Make Paint!

ANY budding chemist can "stir up" a batch of paint . . . even match colors after a fashion. But it takes a whole corps of technicians to produce an industrial finish that charms the eye on the sales floor and stands up to daily use and abuse—or that meets government "specs."

ZAPON helps you lick finishing problems with the right finish—and *Service From Every Angle.* They help you find the answer to problems of surface preparation, finishing procedures, drying or baking.

ZAPON Customer Service representatives help solve finishing problems on your own production line . . . or help set up your finishing department to fill government contracts with speed and economy.

Service from every angle . . .

that's

ATLAS POWDER COMPANY

Industrial Finishes

Stamford, Conn. · North Chicago, Ill.

1. Applying masking tape and paper, to completely cover all window areas and chrome trim.
2. Covering chrome trim around radiators before they are put in place in front of truck.
3. Workmen are taping for wide stripe on hood and cab; also, diagonal stripes on bumper.
4. Afterward a workman strips masking tape from bumper, leaving the 2-color safety pattern.
5. Removing tape from side of hood and cab to reveal the wide strip in contrasting color.

Painting Trucks... *MASKING*

Masking plays an important part in custom spray painting jobs at Seattle truck factory.

SOME interesting views indicating where masking tape is used and how it is used in the production painting department of Kenworth Motor Truck Corp., Seattle, Wash., are shown on the opposite page. This concern manufactures many of the trucks that travel the streets and highways of the Pacific Northwest.

Trucks manufactured in this plant are painted to customers' specifications—to make them effective traveling advertisements for the firms that buy and operate them. This means that paint jobs are turned out in a variety of colors and color combinations. In fact, every truck calls for a custom paint job, therefore facilities and methods must be employed to handle this work effectively and economically.

Masking tape and masking paper are skillfully applied to certain areas to shield them while adjoining areas are being spray painted. After the paint has become dry, the masking tape is carefully stripped off, leaving sharp clean lines of separation.

The sequence of masking and painting operations in the Kenworth shops is similar to that employed in automotive refinishing shops — but Kenworth has introduced one interesting and suggestive variation. Chromium trim on radiators is masked before the radiators are installed in the trucks.

This procedure, shown in one of the accompanying pictures, has two advantages. The tape is more quickly and easily applied where the radiators can be handled as separate units; and the trim is protected during handling and installation, as well as during paint operation.

The speed and accuracy with which multi-color painting can be done when spray guns and masking tape work together, is strikingly indicated by the safety pattern which is frequently desired on the bumpers of Kenworth trucks. Strips of masking tape that outline the stripes are applied over the ground color; then the second color is sprayed on, the paint is allowed to dry and the tape is removed—all in a fraction of the time that would be required to paint two or three stripes with a brush. Masking tape is a time saver in the application of stripes, patterns and insignia; its use insures clean, sharp definition of the sprayed colors.

The same procedure — and the same tape — can be seen in opera-

tion in automotive refinishing shops throughout the country—including those that specialize in the application of baked-on enamels. For baked finishes however, a stain resistant tape is generally used. It stands the baking temperature without deterioration, and strips off clean when the cars come out of the oven.

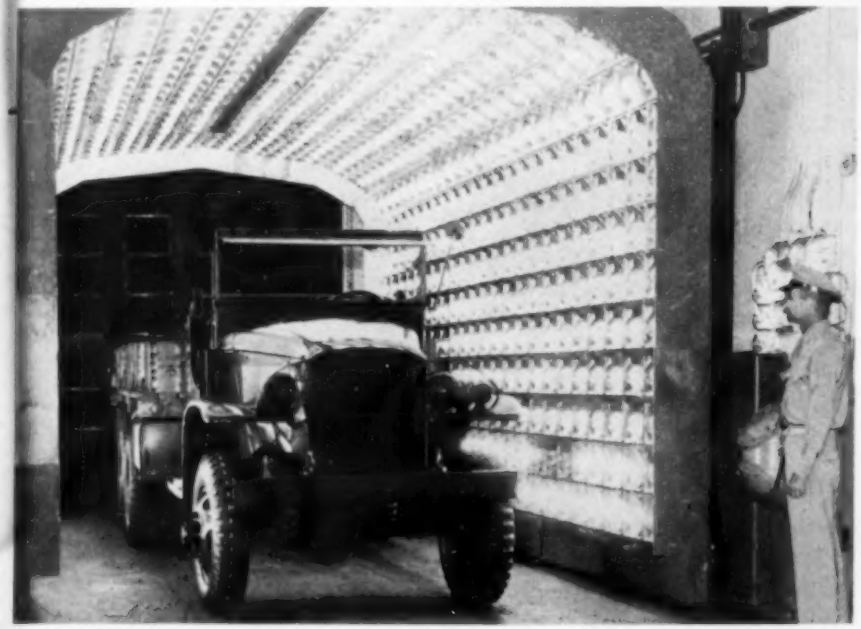
Excerpts from story and pictures published in Nov.-Dec. issue of "Industrial Review," a magazine published by Industrial Tape Corporation.

Daylight Saving Time Card

A handy wallet-size card outlining the type of time—daylight or standard—that is being observed in the cities and states throughout the country this summer has been published by F. H. McGraw & Co., 51 E. 42nd St., New York 17, N.Y., construction firm, and is now available for free distribution.

Wet Abrasive Blasting

A 4-page folder describing a line of newly developed compact wet-blasting units (no moving parts) designed for high production deburring, descaling, stock removal and general surface finishing, is available from the manufacturer, The Cro-Plate Co., 747 Windsor St., Hartford 5, Conn.



Army trucks. At Red River Arsenal a tunnel of infra-red lamps quickly cures the protective paint coating on army trucks. Clear lamps set in wide-angle, gold-plated reflectors provide a highly reflective wall which practically surrounds the truck. This, it is said, produces a fast as well as complete baking cycle through the use of all of the infra-red rays, both direct and reflected.

Photo, courtesy of Fostoria Pressed Steel Corp. Official Dept. of Defense photo.

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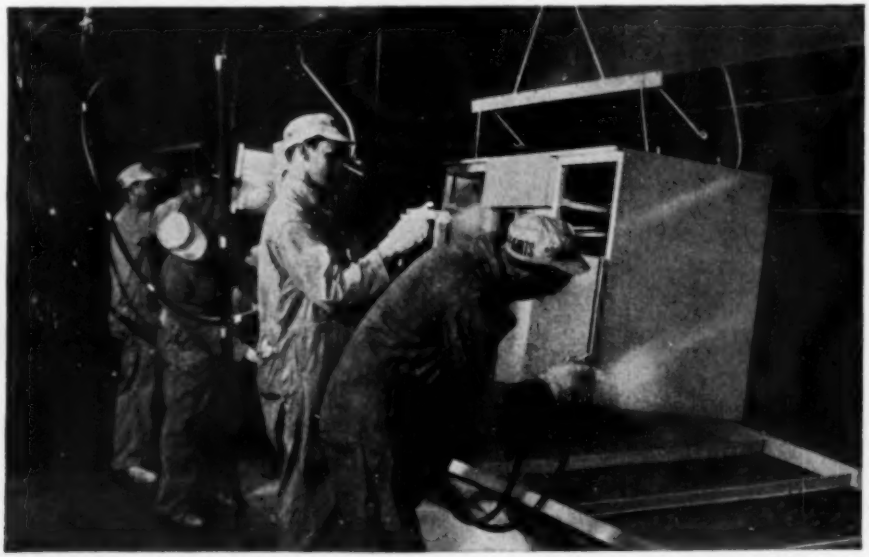
Tell a woman that a kitchen cabinet is finished with Du Pont DULUX—and watch her eyes light up! Manufacturers and their dealers find that this kitchen-tested finish is a big plus feature sales-wise . . . wins *lasting* customer good will.

On over 20,000,000 refrigerators, as well as thousands of other home appliances, DULUX enamel has proved to homemakers the world over that it is absolutely tops in long-term beauty and ease of care.

DULUX home-appliance finish is one of more than 12,000 finish formulas developed by Du Pont to help industry lower manufacturing and maintenance costs . . . boost the durability, appearance and sales appeal of products.

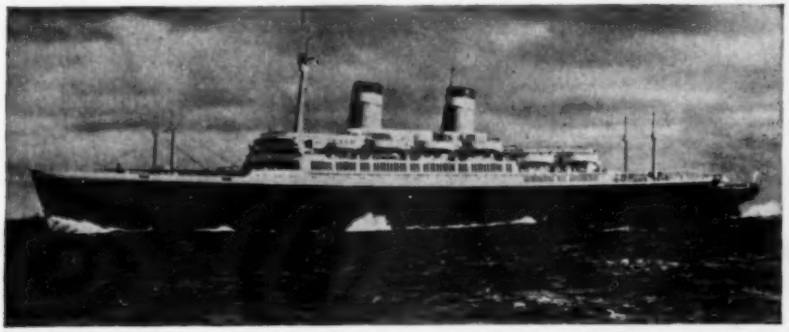
Do *you* have an industrial-finishing problem? You can get expert help by contacting the Du Pont sales technician in your area . . . or by writing E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.



CABINET FOR A SINK IS FINISHED IN A WINK on this fast-moving production line—with Du Pont DULUX enamel! But more important, manufacturers of metal home products know they can count on DULUX to give years of washable, chip-resistant, grease-resistant service in the home.

TO BREAK DOWN A WOMAN'S SALES RESISTANCE, here's nothing like a DUCO or DULUX Furniture Finish. One look at that rich, satiny sheen and she begins visualizing the piece in her own home. What's more, she knows the finish will resist discoloration, cracking, crazing and alcohol spillage for years—when it's made by Du Pont!

PROTECTING STEEL'S ACHILLES' HEEL! A nearly perfect metal, steel has one weakness—it corrodes. That's why Du Pont paint chemists have spent many years developing finishes that guard steel against the moisture that causes corrosion. Here a chemist is actually weighing that moisture vapor that has passed through a paint film.



ON THE ICY ATLANTIC . . . UNDER MEDITERRANEAN SUN, a DULUX Marine Finish keeps topsides gleaming white aboard American Export's new luxury liner *S.S. Independence.* DULUX is used below decks, too . . . helps provide a smart atmosphere to add to the pleasure of passengers.

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What will it do for Me?

The "it" in this title can refer to anything that industrial concerns buy—materials, supplies, equipment—but as an example, the author takes up chemicals and treatments for the control (and prevention) of corrosion, such as rustproofing, and he particularly recommends a demonstration setup where real performance tests can be made.

By Frank P. Denman
Anti-Corrosion Company

CORROSION is today's major public enemy No. 1—more destructive in material losses than all the wars of history. Corrosion is going on all of the time; silently but surely it destroys by disintegration—by the reaction of chemical elements in the atmosphere and by gases and liquids coming in contact with other elements that are present in fabricated metals and in solids of inorganic substances such as concrete.

In striving to protect metal it is not sufficient to paint or otherwise cover up its surface, however clean it may be. The cause of corrosion or rust simply "goes underground". Working quietly but effectively, it can completely destroy the "protectection" that has been applied.

To arrest corrosion effectively, the metal surfaces of a product must be properly prepared—chemically treated—in such a manner as to provide a permanent affinity or "bond" between the finish coating and the metal itself.

Remarkable progress in combating corrosion has been achieved through the earnest cooperation of laboratories and engineers in the chemical and protective coating industries.

In the chemical engineering field there is a constant demand on all of the leading universities for promising graduates. There is also a demand for sales engineers. In fact, the majority of companies are understaffed in this most important position. After all, the sales department represents the blood stream of any organization.

Many thousands of dollars are spent annually training these potential sales engineers in the various methods and procedures employed. Every assistance possible is given them. Advertising—direct mail, local and national—conveys an educational message to industry in "Metal Preparation and Finishing", with the prime purpose of emphasizing the value of preventing or controlling the possibility of corrosion in the products they use and manufacture.

All of the efficiency and perfection so earnestly portrayed by the various home offices of companies that make and sell metal protective chemicals, treatments and coatings

must be re-broadcasted by way of their respective "blood streams"—their technical sales engineers.

Salesman's Responsibility; He Must Learn by Experience

Each technical sales engineer must go into the field as a "pioneer", endeavoring to assist and perfect, if possible, some existing system of metal protection and finishing. Remembering that this man—this trained sales engineer—represents everything that his firm has spent in years and untold sums of money to bring itself up to its present position, he is the key contact man in this matter of corrosion control. His education can not be obtained entirely from college. He must have practical experience so that he can convey information in the language of practical men in industry and gain the complete confidence of one or more important men in the organization he is trying to help.

Now the question arises, how can he obtain this practical experience? In a laboratory or factory? The prospect is definitely not interested in laboratory procedure. He is interested in practical applications in his own establishment, such as new methods of handling his parts or products, ideas that will assist him in speeding up production or producing a better decorative appearance on his finished products, or getting longer life and greater durability out of the finish on his products. He is also interested in simplicity of control of the product (chemical or paint), the operating time involved, the cost and the possible savings. Yes, he is interested in all of these vitally important phases of *his own manufacturing business.*

Let us take a trip into the field with your new sales engineer who has had no practical experience. He (and invisible you) calls on the Prospect Co. Like many other organizations, this Prospect firm has in operation a certain system of procedure. They are using chemicals and supplies similar to what your sales engineer has to offer.

Calling on a Prospect; The Great Hurdle

The new sales engineer walks in, gets acquainted and, if possible, looks over the firm's corrosion-proofing setup. Is he going to tell the Prospect people that their present system is obsolete and that the chemicals they are using are not the best? Here, perhaps, lies the greatest stumbling block a technical sales engineer has to hurdle.

Now remember, your sales engineer is supposed to have all of the knowledge possible regarding your firm's products. But how much practical thought if any does he give to the Prospect Co.'s products and the Prospect Co.'s problems? The Prospect Co. has trained personnel who are thoroughly familiar with the chemicals and procedure of its present system.

Trial Run in Their Factory Can Be Unsatisfactory

How are you going to get your product introduced into this organization? Is it fair to ask Prospect to dump its present material and try yours? Even if the company does agree to such a trial, should you subject your finished product to Prospect's operator, a man who is

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unfamiliar with the recommended control factors that are so vitally important in its success?

You might take a chance of guaranteeing "satisfaction". If, after trying your product, the Prospect Co. is not entirely satisfied, all it has to do is return the unused material—and you will issue credit. Is that good business?

Remember, your sales costs are high enough. But still you are going to subject your *final verdict* to a strange operator who is unfamiliar with the important recommended controls and procedure of your product. Remember also, if the work this unfamiliar operator turns out is rejected by the inspector, who pays for material loss, time loss and chemicals?

Ask yourself again, "Is this procedure fair to the Prospect Co. and to your own Home Office?"

What Trains Salesmen and Convinces Prospects

Suppose your Home Office goes one step further in assisting its sales department by installing a commercial size demonstration department where every new sales engineer can be thoroughly trained in the pactical application of the products he is going to introduce and sell to industry. Senior sales engineers in the field, seeking new business will find that their success rests in the number of good demonstrations performed. Each satisfactory demonstration represents new and practical interest created in your products.

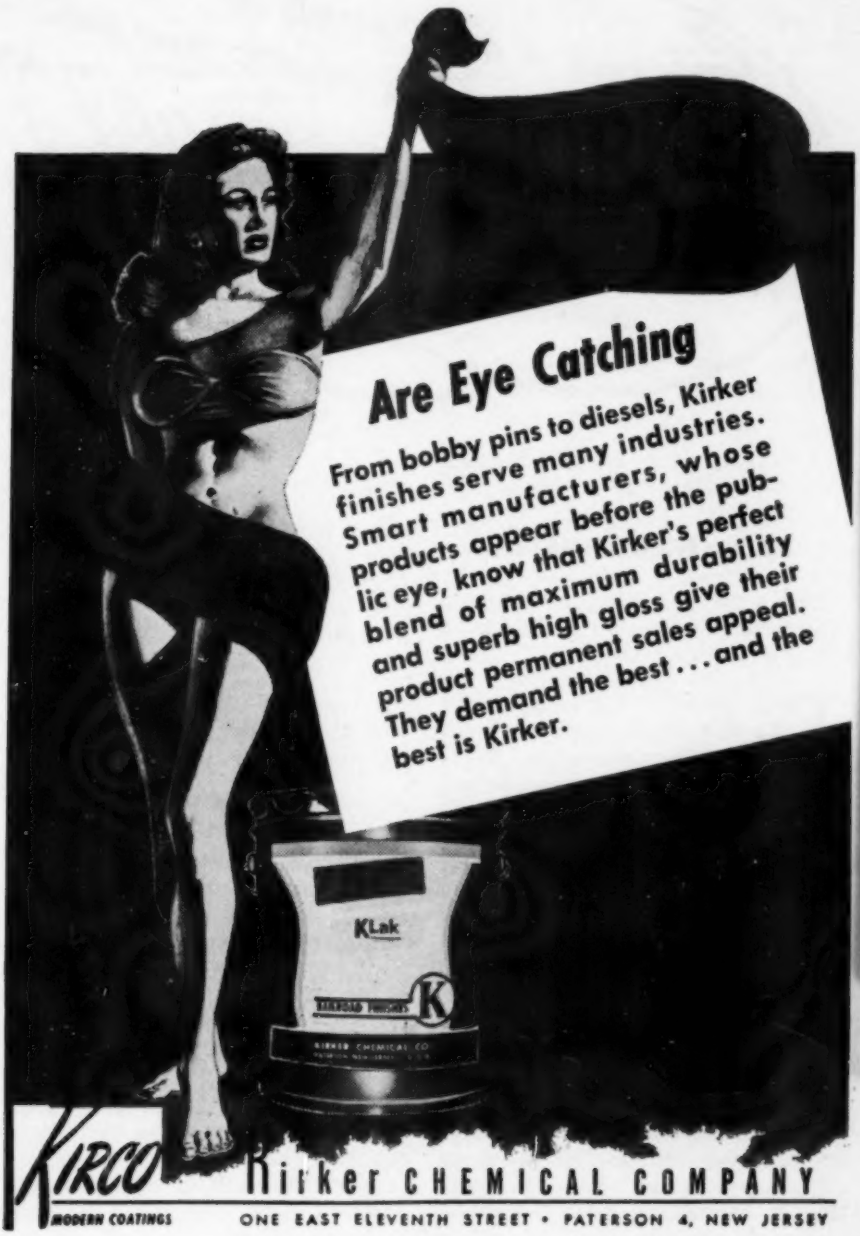
The junior sales engineer, acting in the capacity of operator of the demonstration setup, receives a practical training that will be tremendously valuable to him later when he is on his own, contacting important industrial people. His sales training will be supplemented with practical sales talks conducted by the senior sales engineers who bring in prospects for demonstrations.

Demonstration Aids Salesman; Teaches Customer's Operator

This demonstration department can also be used as a training center for customers' operators, further demonstrating to the industry your desire to put more competent operators in the field. Remember, a well informed, cooperative and skillful operator can help to keep your product performing efficiently, economically and safely. On the other hand, an operator who is not properly informed about the details of procedure, or one who is non-cooperative or careless, can cause the demonstrated material to make a poor showing—and that can ruin the chances for a sale.

Never before have we had more interest aroused in the minds of manufacturers with reference to the appearance and durability of their products. This has been accomplished by consistent advertising by the paint, chemical and equipment manufacturers.

This factory demonstration setup will verify all of the statements so earnestly and consistently made by your company's representatives, and I am sure that the key men in industrial plants will welcome the opportunity of viewing this dignified means of finding out "What will it do for Me?"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SELLING A NEW HAND A FILLING JOB HAS ITS POINTS, BUT— WHO SAID PSYCHOLOGY WAS THE ANSWER?

By H. H. CONNELLY

THE GREEN BANANNA for the furniture finishing plant is the filling operation. Since this is the first department to get a whack at this most important phase of finishing, there are probably more accusing fingers pointed in this direction by the inspection department when pin holes, rough porous grain, and dirty finish occurs, than in any other peaceful routine.

A portion — admittedly on the heavy side—is blamed on the failure to get men to stay on the filling job long enough to thoroughly pigment their skins with the black and brown paste wood filler used in furniture finishing. The other portion is blamed on poor workmen, who are blamed on the foreman, who always ends up being the goat anyway.

A Conducted Lecture Tour to Impress New Man

I have a sneaking notion that if the foreman would make the first trip of the new employee into the filling room more of a lecture and sight seeing tour—say on the order of the conducted tours through state institutions for mental illnesses—his troubles would dissolve into thin air.

Such an introduction would go a long way toward lifting the mental fog which seems to settle so quickly over a new hand as he walks into a filling room and sees perfectly

sane people smearing black mush over beautifully built furniture of the finest imported and domestic woods. On close observation, the glint in his eye reminds you of a wild critter trapped in a slaughter pen.

Escort your new man to the finishing room.

The first step, of course, is to put him at ease. Get right to the core before he has an excuse to bolt. Explain quickly it isn't axle grease or burnt cyliner oil being rubbed into the wood. Regardless of how much it may resemble slop for the family pig, it is perfectly sanitary to handle. But be sure he gets a whiff of the stuff. Smelling is believing.

Dramatize Wood Filling; Demonstrate Its Safeness

At this point it's a good morale booster to strike a devil-may-care pose. Pick up a handful of the goo. As you talk, let it trickle through your fingers like ground cheese through a sausage mill. Handle it like a sour-dough handling gold bearing mud. Here is the place to start your lecture. Explain that wood filler is a mixture of finely ground silicon dioxide, chemically known by the symbol SIO_2. It's a chief ingredient of glass and as common as beach sand. When it isn't colored with stains, it's transparent, hard and inert to acids, alkalies, heat and light.

If you're a forceful speaker you should, at this point, see signs of awakening interest; and the embryonic worker will begin to dream of himself, not as a back-breaking laborer, but as another Einstein or Curie. The filling room will take on the appearance of a research laboratory. Cans will look like beakers and pressure-feed containers will seem to be complicated distilling apparatus.

Lecturing Plus Acting Gets His Interest—You Hope

Don't stop here. Lift your arm and let a little of the goo ooze down your bare elbow. Let him see you have no fear of skin dermititis. This is called the "indirect approach" by psychologists; it is far more effective than blurting out the truth.

At this stage, explain how the properties of silex give it the good qualities for filling wood pores; makes them level for finishing materials. You know already it has a tendency to settle hard and is unsurpassed for imparting adhesive qualities and has a microscopic crystalline structure of uneven jagged edges that give it good sticking properties; but does he?

Watch him closely for emotional disturbances. See if he is casting evasive glances in the direction of the other man's clothing. If so, this calls for the most personal sacrificial action you, as a foreman, have had to face. It calls for an enormous measure of loy-

alty and character—a strain of moral fiber robust almost beyond belief. Without hesitancy and without making an issue of the subject by trying to persuade him that filler is harmless to the clothes, use the indirect approach, fearlessly, once more. Carelessly sling the goo from your hand, and wipe the remainder on your English Tweeds. There's nothing under the ceiling more convincing. He'll think, "If it doesn't hurt his tweeds it can't hurt my overalls."

Show him how harmless filler is to clothing.

Simultaneously you can be muttering in your beard, "What the hell is a $30 pair of tweeds. It's all for dear old Reliable Furniture Company."

In a few minutes, tear yourself away with an excuse to see a man about a barrel; rush over to the naphtha can. Filler comes off easily if swabbed while wet. Then too, while alone, it's a good idea to mull over the balance of your sales talk. For instance, the three functions of filler are to: 1) fill the pores for a level foundation, 2) hold out the absorption and finishing material by sealing the pores, 3) act as a combination filler and stain to give the finished wood a pleasing even tone.

Recently I listened, sympathetically, to the wails of one of my finishing foremen on poor labor, faulty filling, etc. As I listened I recalled a lecture we had heard from the personnel on new employee indoctrination a few days before, and the humorous application of his theory to the foreman's problem was too good to pass.

By the time I had stopped explaining how he could apply the theory in our finishing, the absurdity of the whole thing had him in stitches and when I left he had forgotten what his beef was.—

H H Connelly

Do Sacrifices to Impress New Man Pay Off?

Now if your new employee is of the intellectual type—scholarly, prone to delve deeply into his work —a few words on the chemical property of filler may awaken sleeping interests untouched by your first angle of approach. For instance, mention that in addition to finely ground silex, there is ground linseed oil, japan drier, turpentine, and different colored pigments such as umber and ochres. It's these that give the powdery sand such a terrific punch in bringing out the beautiful grain texture. Of course, he needn't know about mixing filler —why filler shows gray under mahogany or walnut if the solids are

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out of proportion to the oils and solvents. That's your headache.

Better concentrate briefly, of course, on the physical technique for padding in. Some men have the impression that our machine age has eliminated what is vulgarly referred to as labor. Show him how to wipe the excess filler across the grain with jute or rags. Probably let him look on while you sweat over a dozen or two chests yourself. The indirect approach again. Of course, you won't be working—you will be lecturing between gasps for air and the vocal demonstrations.

With the filler off your tweeds, your lecture in order, mosey back. Where is he? No cause for raising your blood pressure; probably under the table looking at the stuff through a reading glass. What's that? Gone? Damnation! The minute your back was turned.

Oh, well. Just goes to prove my point; why in hell doesn't some smart cookie invent a machine for filling, anyway?

Show him how to pad in and wipe off excess filler, giving reasons for everything as you direct attention to the work.

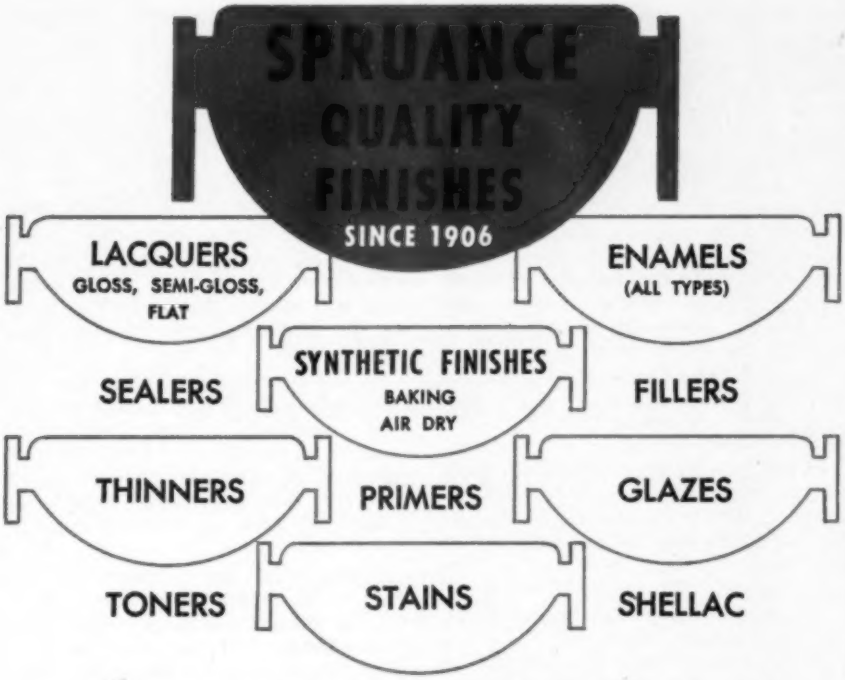
Steelwool in Finishing

Steelwool, properly selected and used, works very well for some touch-up rubbing and . . .

FOR MANY finishing operations, any attempt to substitute steelwool for abrasive paper will be less than satisfactory. Whenever wood or metal is to be prepared for finishing —when a surfacer or sealer coat must be cut down or a cabinet rubbed—the proper material for the job is abrasive paper or abrasive cloth. However, there are several jobs, especially in wood finishing, where steelwool can be used to advantage. Through judicious use, it can be not only a valuable time-saver but it can also contribute substantially to the appearance of the finish.

While paper backed or cloth backed sheets of abrasive remove material because each grain of abrasive cuts its own groove or furrow as it moves across the surface, the longer strands of steelwool have a slicing or shaving action when pressed flat; consequently, there is less dulling of the finish.

The backing of paper or cloth limits the flexibility of sandpaper and emery cloth. Even when held in the hand or when folded over a soft pad, sandpaper has a tendency to remove the high spots from a surface first and then gradually cut down until the last depression disappears. A pad of steelwool, however, will follow every contour of the surface. When moved across a surface under sufficient pressure the fibers will find their way into every depression, no matter how small. [*To 78*]



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Steelwool is manufactured in the finer grades from 1/0 to 5/0, the latter being the softest. Coarser grades are numbered from No. 1 to No. 5 or No. 6, but these are of little interest to the finisher.

When smoothing or dulling finished wood surfaces, the pad of steelwool, like sandpaper, is always rubbed with the grain wherever possible. Steelwool is particularly useful for smoothing or rubbing the recesses of carvings, embossed woodwork and some mouldings, where it would be impossible to move even the smallest piece of paper. Flutes, mouldings and turnings are difficult to rub with sandpaper but can be quickly given a rubbed effect with a bit of steelwool. The coarser the grade, the duller will be the effect achieved. It is often desired to give a feeling of smoothness to out-of-the-way areas without resorting to rubbing. This can be done economically with steelwool.

When the tops of cabinets or furniture are rubbed, there may be a few minute defects that are not erased by rubbing. These are especially noticeable around edges, where the lacquer or varnish has "beaded up." For many reasons, further rubbing may not be feasible. Some finishers simply let them show. A better way is to erase them with steelwool; a few passes will make the defects invisible.

Rubbing with steelwool also blends out the marks where the rubbers overlap. One of the most attractive finishes that I have seen for television cabinets is accomplished in this way. After a top or front is rubbed in the usual way a trained man takes a fresh pad of No. 2/0 or 3/0 steelwool and, exerting considerable pressure, he makes a series of straight unbroken strokes from edge to edge, parallel with the grain, overlapping just enough to produce the desired sheen. When the top is finished the same treatment is accorded the front —that is insofar as openings and decorations will permit. The sides, though not rubbed, are steelwooled to cut down any nibs and to reduce the gloss. The richness of this finish results from the velvet-like luster imparted by these microscopic lines.

Large panels, such as office partitions, often feel rough after being finished. Rubbing being out of the question, a going over with steelwool will remove the roughness, making the paneling easy to clean and wax.

In metal work, rust often pits the surface to a depth that makes removal with abrasives unwise, due to the amount of metal that would have to be removed. The ability of steelwool to reach into pits makes it possible to get the rust out without harm to the metal.

Because of the tendency of the strands of steelwool to break up in use, a careful clean-up after steelwool rubbing is important. Steelwool should never be used where the fibers can be caught on the surface or trapped between coats. It is important too, to buy only the best quality of steelwool. The cheaper steelwool may be unsatisfactory in many ways.—G. A. CONRAD.

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Paul Blackmore's 12-page article entitled

"HOW MUCH IS A GALLON OF PAINT WORTH"

as published in the August, 1950, issue of this magazine.

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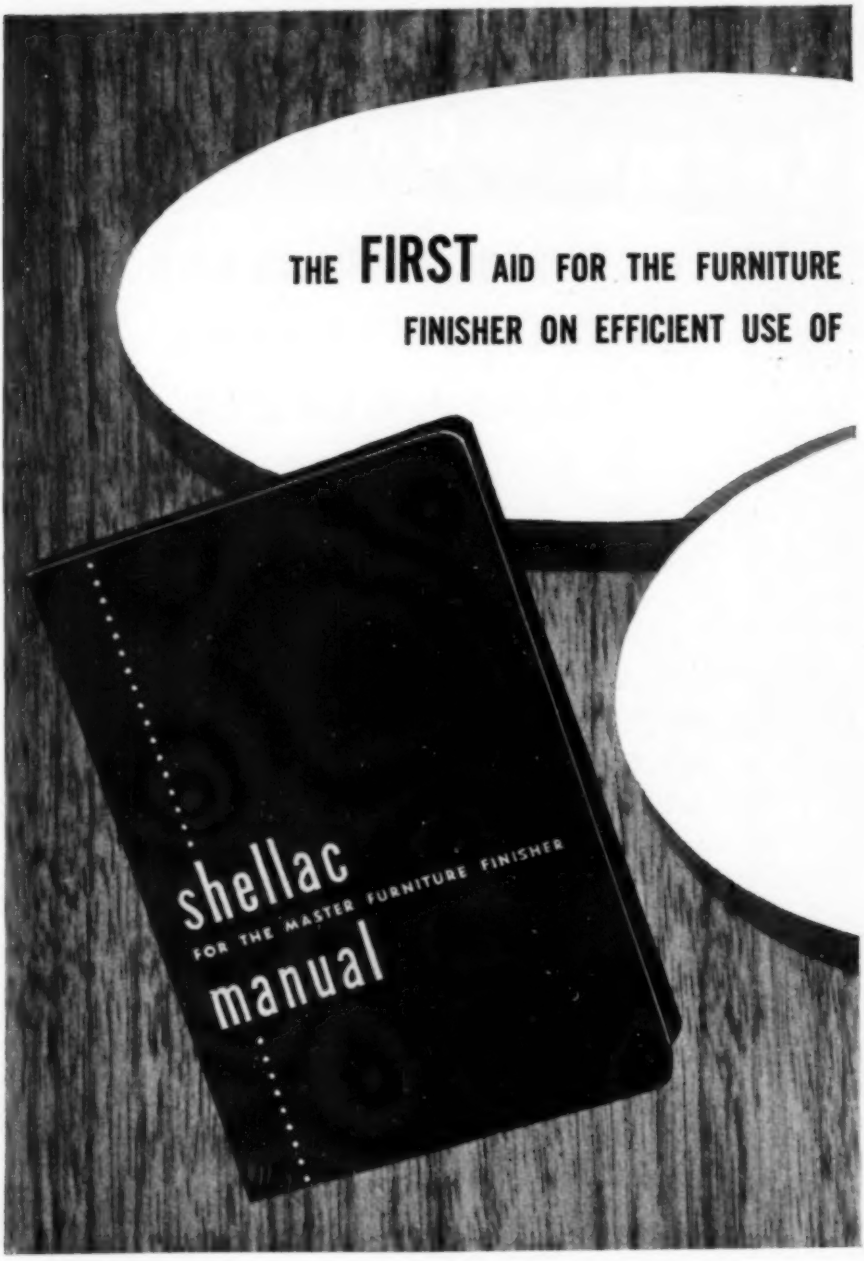
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Dept. I-6

Pressure Sensitive Felt

We are interested in a paragraph of "Random Comment" in the April 1951 issue, page 4, concerning Pressure Sensitive Felt. We would like to get the manufacturer's name and address.—*V., Inc.*

Information supplied.—*Editor.*

Sprayed Hot Enamel Okay?

In a past issue of Industrial Finishing we saw where fluorescent fixtures were sprayed with heated enamel (not hot lacquer). We have lost this issue. Do they get away with one coat? Without thinner?—*C. E. Co.*

The article appeared in July 1949 issue, pages 30, 31 and 32. According to the author, the material used is a white alkyd-resin-base enamel. Some areas are given a double wet coat (a heavy coat) while others are given a single wet coat. Enamel is prepared (mixed with thinner) in a central supply room and delivered to spray booths through pipe lines. Less thinner is used (50% according to the author) because the enamel is run through a heater before being sprayed.—*Editor.*

Safe Vacuum Wanted

We are interested in getting some information on an Industrial Vacuum Machine with which we could clean our finishing ovens and spray booths. We wrote one company which had an ad in your magazine, but they claim that they do not have underwriter's approval for the use of their machine around inflammable gases and liquids. This, of course, would not make their machine practical for use in a finishing room. . . . . Who makes these machines?—*F. H. Furn. Co.*

We are not sure. In a letter we are submitting names and addresses of several manufacturers of industrial vacuum cleaning machines.—*Ed.*

High-Reflecting Paints

We have been using Industrial Finishing for reference in purchasing paints and varnishes. We want to get some white undercoat high-reflecting, and some fluorescent material, as per Army Air Force Specification 14102-A, Color No. 61, Green, phosphorescent. Would it be possible for you to offer assistance in recommending a source for same?—*G. Mfg. Co.*

In a letter we are submitting names and addresses of firms who may be in position to supply what you want.—*Editor.*

Expert Hand Graining

We are very interested in hand graining. Do you have any information on this subject? Do you know of anyone who is an expert in this line that we can correspond with?—*S. C. Co.*

We have published a few articles on this subject, and we offer a book

STANTITE

the wash primer that *stands behind* your finish

STANTITE Spraying Primer and STANTITE Clear Primer (for dipping) offer outstanding resistance to corrosion and rust creep, as compared with conventional wash primers. They provide excellent adhesion to all types of metallic surfaces and may be used with most types of top coats. Created for application under air-dried or baked finishes, STANTITE dries rapidly . . . is unimpaired by any baking schedules. Result: your finish looks like new through added years of product use. Find out now what STANTITE can do for your product . . . for complete information write today to the Stanley Chemical Company, 21 Berlin Street, East Berlin, Connecticut.

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Industrial Coatings

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LACQUERS SYNTHETICS JAPANS ENAMELS

on "Graining, Ancient and Modern", price $4.00. No more copies of the magazine containing the article are available.—*Editor.*

Want Air-Dry Wrinkle

On page 94 of March issue there is an article on "Air Dry Wrinkle". We would like to have a list of the manufacturers who make this type of material.—*B. C. Co. (Caskets).*

We are interested in obtaining the names of paint manufacturers who produce an air-drying wrinkle finish paint. — *L. & N. (Measuring Instruments).*

We are referring your inquiry to New Wrinkle, Inc., 1819 Bankers Bldg., Chicago 3, Ill.—*Editor.*

Roller Coaters Wanted

In the April 1951 issue of this magazine, in "Letters from Readers", page 84, we noticed several references to Roller Coating Machines. Please send us a brief list of companies that make and sell roller coating equipment.—*D. Co.*

Please give us the names of Roller Coater equipment manufacturers.—*C. M. J. Co.*

In a letter we are submitting names and addresses of those we know.—*Ed.*

Rubberized Satin Finish

In the "Random Comment" section of April 1951 issue of this magazine, page 4, there is described a new interior paint called "Wallhide Rubberized Satin Finish". Because of the interest I have in paints based on rubber or related products, I would like to obtain the name of the manufacturer of this interior paint in order to get more information about it.—*R. & H. Co.*

It's a product of the Finishes Division of Pittsburgh Plate Glass Co. —*Editor.*

Sandblasting Strips Finish

Sometime ago, in this publication, I noticed an article regarding sandblasting equipment for stripping or removing old finishes preparatory to refinishing. Do you have available knowledge of the source of supply of this equipment, or information regarding same?—*D.M.G.*

Would you please send us the names and addresses of manufacturers of sandblasting machinery for removing paint or varnish from furniture or cabinets, metal or wood?—*L. & E.*

Information supplied.—*Ed.*

Rustproofing; Paint Bonding

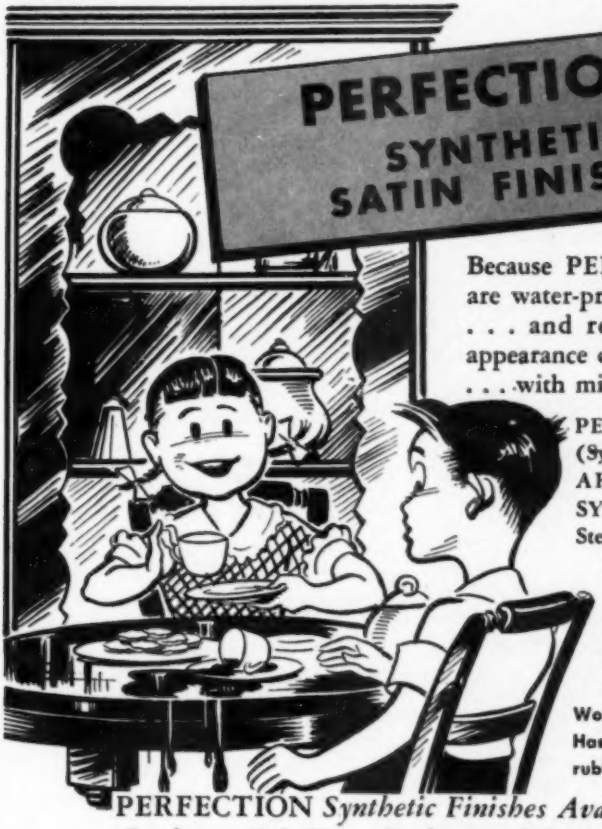
We refer to Industrial Finishing, May 1948 issue, page 44. Please advise where we can get more information about "Banox", and who is the manufacturer of this chemical. Also, supply us with a list of manufacturers furnishing necessary chemicals for rust-proofing and treating galvanized sheets for a 2-coat Dulux white finish.

We plan to install a cleaning, treater and dryer, and it is our desire to get equipment that will give satisfactory results at a minimum cost; 17 cents per 1000 square feet seems to us inexpensive.—*N. S. Mfg. Co.*

In a letter we are naming the manufacturer of "Banox" and several other concerns that can supply mate-

Mamas DON'T WORRY

WHEN FURNITURE IS FINISHED WITH



Because PERFECTION finishes are water-proof . . . liquor-proof . . . and retain that beautiful appearance of hand-rubbed finish . . . with minimum care.

PERFECTION FINISHES (Synthetic or Lacquer Type) ARE FLATTENED BY SYNTHESIS rather than by Stearate or Other Foreign Flattening Agents.

Clarity of Gloss Lacquer even in lower sheens • Will either gloss or dull rub • Won't haze or sweat back • Has that rubbed effect without rubbing • Has a waxed feel.

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PERFECTION PAINT & COLOR COMPANY

715 E. Maryland St., Indianapolis 2, Indiana

rials for and information about surface treatment to give both rust-proofing and improved paint-bonding qualities to various metal surfaces. —*Editor.*

Make a Stripe 1/2-in. Wide?

We are interested in obtaining a striping tool with a tip approximately ½-in. wide that can be used on smooth, concave and convex surfaces. Please send us the name and address of any companies manufacturing such a striping tool.—*D. Cabt. Co.*

We do not know of any striping tool that will apply a smooth clean-cut stripe as wide as ½-in. We have had many requests for such a tool but have never found anything of this kind available. Alternate methods are as follows:

1) Use a smaller striping tool (one that makes a stripe ⅛-in. wide or 3/32-in., see advertisement in recent issues of this magazine) and run these stripes parallel and ½-in. apart on the outside. Then fill in between them with a hand brush.

2) Another method is to resort to masking and spraying, which is what is generally used when a wide color band is applied to any surface.

3) Use decals.

You might also investigate the possibility of doing this with a spray gun that carries small side shields on both sides to confine the spray within narrow limits. This type of gun in the hands of skillful operator might work. Consult your spray gun manufacturer.—*Editor.*

Tumbling-Dipping Setup?

We are looking for a tumbling barrel type of paint dipping equipment. It is . . . . a tumbling barrel that is immersed into a tank of paint, rotated and then raised and spun, giving the parts a tumbling action therein, until dry. At the time of spinning, a warm air stream is directed on the parts to hasten the drying. Any information you might furnish concerning a piece of equipment as mentioned above, or similar equipment in the paint dipping line, will be appreciated.—*F. Aircraft.*

Evidently you have in mind what is commonly called a "dip-whirl" machine wherein small parts placed in a wire mesh basket are dipped or flooded with paint, then the container of paint is lowered or withdrawn and the basket of parts is rotated rapidly to throw off the surplus paint by centrifugal force. Machines of this type are advertised in recent issues of this magazine.—*Editor.*

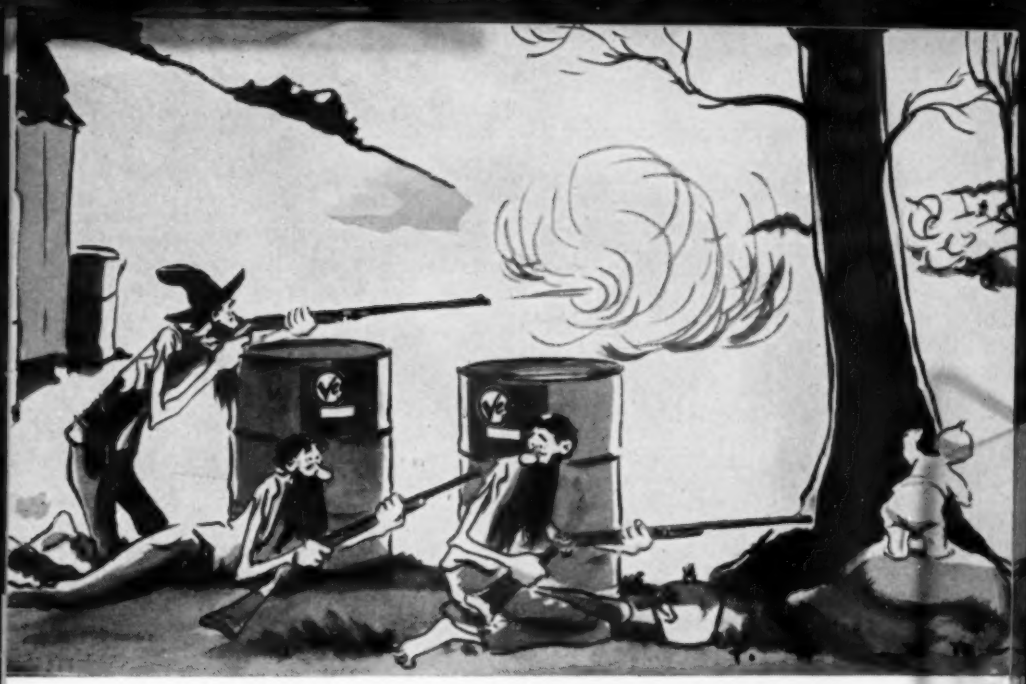
"Zincilate"? Who? Where?

Could you supply us with the name and address of the company that makes "Zincilate"?—*K.*

One of our reference cards indicates that this is a one-coat self-protecting, anti-corrosive coating developed by The Commonwealth Engineering Co. of Ohio, 1771 Springfield St., Dayton 3, Ohio. Another card names it a product of Industrial Metal Protectives, Inc., Dayton, Ohio.

P. & L. Odorless Paints, Too

Relative to the subject of "odorless paint", referred to on page 95 in May issue of this magazine, we wish to point out that we have been making odorless wall paints for more than five years . . . . However, during this period, due to material shortages from time to time, it was not always possible to make these products odorless. It is only since a steady and



"ONCLE THUD SEZ *VEDOC* DEFENSE PAINT IS JEST ABOUT OUR BEST PROTECTION"

Uncle Thud's been getting around lately, for it's true. You just can't beat VEDOC Defense Paint for a good protective finish.

With our World War II experience to draw from, our research staff has been busy finding new and improved ways to give you the very best in government specification finishes . . . finishes that work best with your own coating methods. And we've expanded our production facilities to serve you quicker . . . more efficiently.

Whether your orders are for gallons or drums, each one receives the same prompt and thoughtful attention that has helped Ferro build a reputation as a good, dependable source of supply.

When you bid on Defense Orders calling for specification finishes, let us help you. Write to Ferro for quotations and assistance on any Defense Paint problems.

Remember, Ferro is set up to provide Complete Organic Coatings Service. From the development of diversified protective coatings—to the designing and installing of efficient finishing oven systems.

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LIQUID PLASTICS DIVISION
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Vedoc

constant supply of the proper materials have been available that we have been able to make every lot odorless. We are not referring to "perfumed paints" or paints in which an attempt has been made to mask the odor. We refer to paints that lack odor . . . .

Upon investigating an occasional complaint that these paints are not odorless, we have found that the painter or the user has thinned them with turpentine or mineral spirits, with the result that they have the usual odor. If these paints are thinned with our Exode Reducer (a special thinner) they retain their odorless qualities.

These paints have been received and used with enthusiasm by hospitals, hotels and industrial plants where paint odor is a problem. In hospitals, rooms have been painted and slept in the night of the day they were painted, without the slightest eye smarting, odor or discomfort.—*Pratt & Lambert, Inc.*

We Process Paint Sludge, Too

In a recent issue of this magazine we notice an inquiry about dehydrating paint sludge, etc. We have been doing this for more than ten years and would therefore appreciate it if you would put us on your list so that when you receive inquiries our name would also be sent them.—*Toledo Paint & Chemical Co.*

Fluorescent Bronzes

We are interested in names and addresses of manufacturers of bronzing powders in fluorescent colors, as mentioned on pages 119 of January 1951 issue.—*M. H. Inc.*

Interests us too . . . .—*B. L.*

Information supplied.—*Editor.*

Wrinkle on Wood: Metal

In April issue, page 96, we notice a reference to wooden caskets with a metal finish. In your comments you did not mention that these articles can be finished to appear exactly like the metal ones when using wrinkle enamels. Our Mr. Conrad's article on wrinkle finishes for wood appeared in December 1950 issue of Industrial Finishing.—*New Wrinkle, Inc.*

More Dip-Coating Bottles

Referring to "Letters from Readers" in April issue, page 86, "Dip Coating Bottles Again", I am interested in the process described by Automatic Radio Mfg. Co., Inc., regarding aluminum or chrome finish. Will you please forward the complete address of the above company, so I may contact them . . . .?—*H. P. Co.*

Information supplied.—*Editor.*

I'll be glad when the boss pulls me off that luminous paint job; I haven't been able to sneak out for a poker game in ages!

MAKE THIS TEST

Substitute steel, die-cast metals, or non-critical materials such as wood or plastic for scarce copper, brass or bronze. Simulate the appearance of these metals with United's *Metal-Tone* finishes and even the experts can't tell the difference. The *Metal-Tone* finishes are smooth, flexible and marproof. Manufactured in lacquer, synthetic and plastic bases, according to your specific requirements. Tell us your existing methods of operation and a generous working sample will be forwarded to meet your needs.

AT YOUR SERVICE

United will prepare special finishes to government specifications or finishes to meet any requirement with a custom-compounded formula. Address your problems to: Research Dept., United Lacquer Mfg. Corp., Linden, New Jersey.

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Reduces Costs 33 1/3% to 50% Usually
Reduce Valuable Floorspace from 25% to 33 1/3%
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Know to the Hour When Items Will Be Out of Your Finishing Room

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Individuality

A product — like a model — must have individuality to arrest attention.

In many instances, individuality in merchandise is nothing more than the use of a special finish to enhance design . . . flatter detail.

If you feel your product needs such a special coating to give it more allure, let our Creative Studio prepare a compelling coating for you. No cost or obligation for our worthwhile service.

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Mahogany Trouble

We have difficulty in finishing mahogany veneered panels. At times the water stain we use will not penetrate a substance in the pores of the veneer, resulting in a finish that has white specks.

Investigation of this with our finishing supply houses reveals two trends of thought. One is that the substance in the pores is a penetration of the cold-setting resin glue we use in our veneering operation. The other is that certain mahogany veneers have a natural resin in the pores which might be causing our trouble.

Those who believe that the veneer glue is the basis of our difficulties suggest the addition of powdered coloring matter to our glue. This, however, would not be practical because many units of our product are bleached and if any of this colored glue should penetrate, we would not be able to bleach out the pores.

It occurs to us that someone may have had this problem up with you before, in which case you may have some ideas as to the cause and correction.—*R. Co. (Pianos & Organs).*

We are in agreement with the theory that your cold-setting resin glue is penetrating the veneers and, seeping through under pressure; it fills some of the surface pores with a non-porous substance that will not "take" water stains. Mahogany, especially certain types, has large pores and it is entirely possible that some liquid resin, under pressure, will be forced through the cellular system to the surface, especially in thin veneers.

To remedy this we suggest treating the mahogany veneers, before laying, with Glue-Life No. 24 solution, which you have been purchasing from us. Use Glue-Life No. 24 directly as shipped for this purpose. A treatment of the mahogany veneer by dipping in Glue-Life No. 24 will serve to fill the pores sufficiently to offset the seepage of the resin.

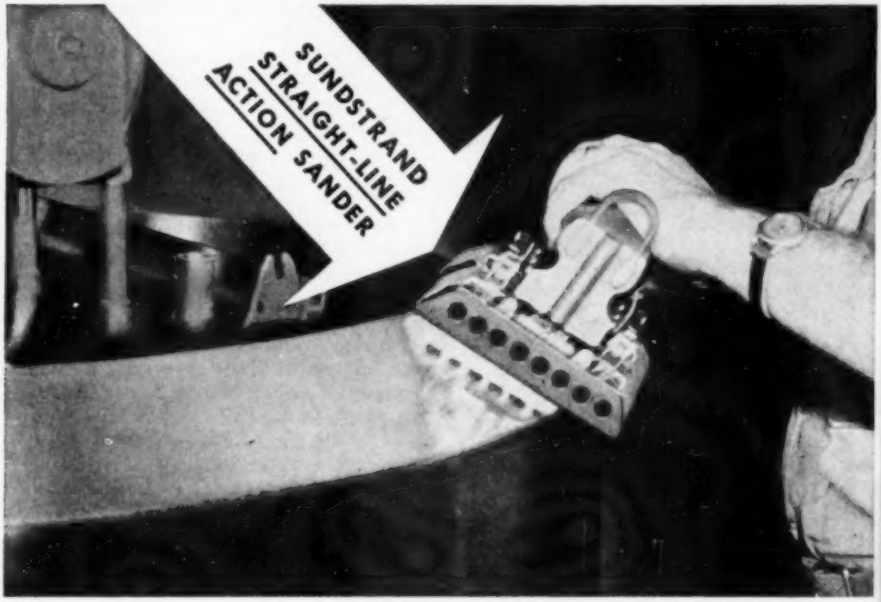
Glue-Life No. 24 is a chemical compound of 5° Baume specific gravity; it penetrates rapidly and spreads instantly. It is entirely compatable with the various types of glues, except casein glue (the caustic in casein glue turns it black). Of course, it is necessary to dry the treated veneer to the proper moisture content before gluing.

Sometimes it is advisable to prepare a thin size solution to treat these veneers for best results. Such a treating solution is prepared by dissolving one pound of dry hide glue in three to four pints of Glue-Life No. 24. If you are interested in this type of treatment we shall be glad to mail you our booklet with instructions for your reference.—*Liquafill Mfg. Co.*

Touch-up Leather Tops

What is the usual procedure or method for touching up leather-top furniture? Can the same steps be used as in wood surfaces? Can shellac stick be burned in, etc.?—*L. O.*

You do not give very much information regarding your problem; that is, whether it is a damaged top resulting



Speeds graining and blending-in of welded seams on stainless steel work

Fast, *smooth* way to carefully finish off seams in stainless steel products. Sundstrand *Straight-Line Action* removes scratches, defects . . . blends in and grains the seam perfectly after assembly. Sundstrand Air Sanders are available in single or double pad models . . . for wet or dry sanding on flat or curved surfaces . . . to handle almost any sanding operation on wood, metal or plastics. See your local distributor or write us today for bulletin IF-6.

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PNEUMATIC DIVISION, ROCKFORD, ILLINOIS

from shipment injury, or accidents in the home (spillage of alcohol, cigarette burns, etc.). Answering your specific question as to whether "touch up" is the same for leather as on wood surfaces I would say broadly, yes, provided the usual leather lacquers and stains are used. It is a french polisher's job, and bad or high spots are frenched in much the same as on wood blemishes. Before this is done, however, the gold tooling design should be masked; otherwise the stains will result in discoloration which is often difficult to remove without injuring the gold surface.

About the shellac burning-in operation, this is done right along in the factory where small holes occur in the hide (shot gun pellets, barbed wire piercing and so forth). This operation precedes the padding or antiquing operation, of course. It is being done a great deal in small shops and repair studios throughout the country — in the case of cigarette burns or where sharp instruments have been dropped on the leather, etc. The usual procedure is to select a color shellac stick nearest that of the surrounding color and then antique over it.

Usually, in the case of leather tops, the tendency of manufacturers, in the first two or three years following the war, was to return to fine quality furniture; drums, cocktails, desks and so forth. In most cases these items were quite expensive. Later, promotional artists came into the picture with printed antiquing on the leather, and decals instead of genuine gold tooling. Of these, of course, I could offer no solution in an attempt to repair damaged places since the unit, as a whole is scarcely worth saving.

However, I have always felt that something might be done about the fine pieces turned out since 1946, or pre-war for that matter, numbering many thousands. A leather top, because of its special construction, is always a leather top and nothing else. If something happens to mar the leather the beauty of the whole piece is, in effect, destroyed.

When returned to the manufacturer there is no problem. They simply apply the usual repair methods used in regular production, or relay the top with new leather where repair is impractical. This, up to now, has been the most sensible thing to do; but a tremendous backlog has forced these pieces into private leather or craftsman studios, or decorators' work rooms. While these workers usually excel in the arts, decoration, crafts of all kinds, there still seems to be a dearth of "know how", as I have previously mentioned, in the proper handling of leather problems. —*Arthur E. Willis.*

Joseph Hager Addressed the Wood Producers Conference

"Advances in Wood Finishes in the Past Decade" was the theme of a talk given by Joseph Hager, Vice-President of the Grand Rapids Varnish Corporation when he met with members of the Wood Producers Conference on May 24 at Norwich University, Northfield, Vermont.

Members present represented the managers of Vermont woodworking plants engaged in the manufacture of furniture, bobbins, shoe heels, toys and plywood.

Mr. Hager is well known in the wood finishes field. Since 1946, he has been a guest-instructor at the University of Michigan furniture courses, talking on wood finishes . . . and has given numerous talks to home-furnishings personnel at large furniture and department stores.

Solvent Cleaning Service in Louisville, Ky.

The Kentucky Color & Chemical Co., 600 N. 34th St., Louisville 12, Ky., announces a solvent recovery service for users of finishing materials within a radius of 200 miles of Louisville.

The company has been in the solvent recovery business for over 15 years and has handled a heavy gallonage of solvent, mostly from paint manufacturers and furniture finishers.

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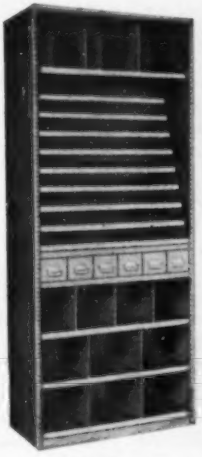
ORIGINATORS AND MANUFACTURERS OF THE UNUSUAL IN *Industrial Finishes*



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INDUSTRIAL DIVISION

PHILADELPHIA 43, PENNSYLVANIA

Stain Killer—"White Enamelac"

After several years of extensive research and field tests, the Haeuser Shellac Co. of Brooklyn, N.Y., is introducing "White Enamelac"—a pigmented, fast-drying stain killer, sealer and primer. "White Enamelac" has the appearance of white enamel but dries much faster and can be tinted to any color or shade by mixing into it dry colors previously dissolved in denatured alcohol. It dries to the touch in 15 minutes, can be recoated in 45 to 60 minutes; no thinning neccessary; does not run or sag. It kills aniline and varnish stains, seals sappy streaks, stops bleeding over any type of stain; excellent for use on porous wallboards, etc.

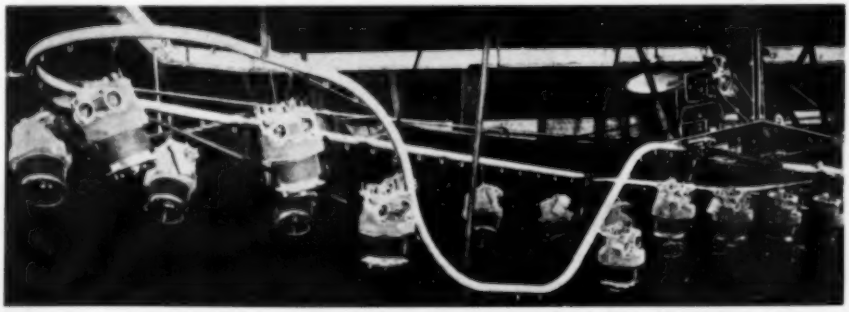
Light Overhead Conveyor

From the Southern Engineering Co., Inc., comes the Chain-Veyor, a light capacity, power-driven, overhead chain conveyor.

The Chain-Veyor has been engineered to provide dependable, trouble-free, long-time operation. It is extremely flexible and its short, radius curves and track sections are easily combined so that changes or additions can be made in a short time.

The Chain-Veyor will handle loads up to 30-lbs. on each pendant spaced at 6-in. intervals or, 60-lb. loads can be carried at 12-in. intervals when supported by two pendants fitted with crossbar attachment. A special sprocket type drive distributes chain stresses, affords a straight line pull and permits operation in either direction.

Bronze universal joints have been placed at 3-in. intervals and, to assure equal wheel loading, regardless of the direction of the chain pull, load wheels are mounted at a 45° angle to the load pendant and at a 90° angle to each other. Lifetime lubrication is provided by "Oilite" bearings. These exclusive features permit smooth, frictionless negotiation of curves with radii as short as 15-in. It is a product of Southern Engineering Company, Inc., 249 N. First St., Burbank, Calif.



Can be set up to include short-radius curves, level and inclined, along with straight track.

The experience of Watson-Standard Laboratories in the field of decorative and functional coatings for the Metal Lithographer has been widely recognized.

Their accomplishments include the development of such outstanding finishes as Wet Print Varnishes, Base Whites, Quick Bake Finishes, Gold Lacquers and Blacker Litho Blacks.

These finishes are available in vinyl as well as conventional types.

These are not of standardized formula but are prescription compounded to fulfill the needs of each individual application. The services of our laboratory and field technicians are available to you without obligation. Let us help you with your problem.

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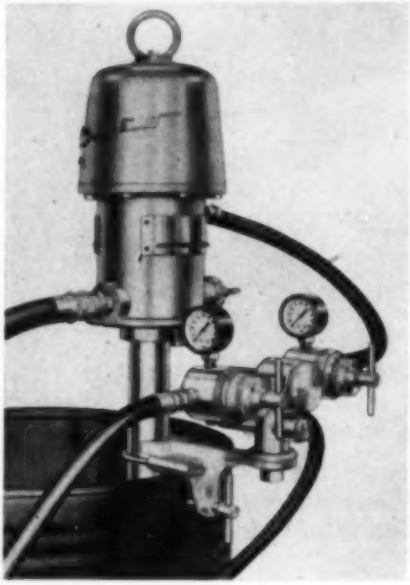
Heavy Materials Sprayed Evenly Without Spurting

Spray gun spurting, which often projects a blob of heavy industrial material upon a coated surface, is eliminated by the new Graco Mongul-Type Powerflo Pump. This air-operated high volume, material handling pump is equipped with a device called the Evenflo which prevents spurting.



Pumps heavy material directly from drum.

Mogul Pumps — operating in original 400-lb. drums or in bucket-type containers — supply industrial material through hoses for spray gun, pole gun or extrusion gun application.

Extra high volume Mogul Pumps operate within a broad air pressure range (from 20 to 175-psi.), can be powered by air compressors with either large or small output capacities.

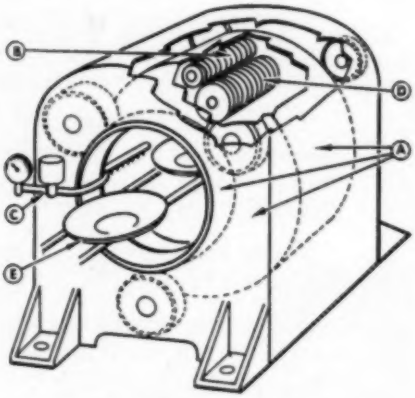
Rust and corrosion preventives, calking compounds, adhesives, sound deadeners, roofing materials, undercoaters, and many other industrial materials can be pumped.

For additional information, write Gray Company, Inc., Industrial Division, Graco Square, Minneapolis 13, Minnesota.

New "Gyromat" Machine Paints Variety of Products

A centrifugal spraying machine that applies industrial coatings to a variety of parts and products is announced by The Gyromat Corp., P. O. Box 600, Fairfield, Conn.

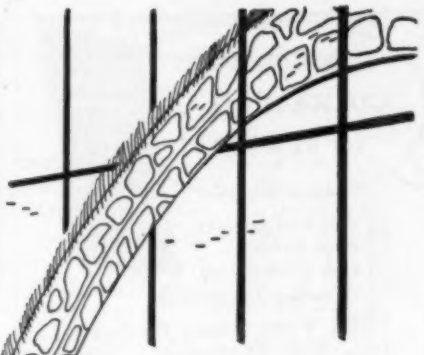
It is called the Norris Gyromat and does not require compressed air or spray booths. Referring to the accompanying drawing, coating material is fed from an external source through feed line "C" to the annulus of rotating bowl "A". Rotation of bowl carries material to feeding rotor "B" which is driven by the fluid friction of the coating material.



Work moves through an airless spray.

Rotor "B" throws the material centrifugally into the surface of the high speed rotor "D" which atomizes the material into a fine mist and floats it onto the work passing through the bowl on conveyor "E". The excess

STRETCH



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**Get tougher lacquers—
Increase cold-check resistance**

Every pound of ketones you use s-t-r-e-t-c-h-e-s your ability to formulate high-quality lacquers.

Because ketones are the most powerful solvents, they permit the use of more high-viscosity nitrocellulose in a lacquer of normal spraying viscosity. This means a tougher coating . . . with greater cold-check resistance.

The greater solvent power of ketones gives you a pound-for-pound cost advantage and important improvements in lacquer quality. Ask your Shell Chemical representative to point out the competitive advantages of powerful ketone solvents.

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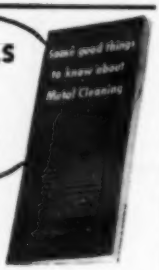
WHICH SOILS ARE HARDEST TO REMOVE?



☐ oils and greases
☐ rust, oxides
☐ rust preventives
☐ drawing compounds

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Finishing Equipment-Systems
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Manufacturers of Baking Ovens, Washing Machines, Spray Booths

material (overspray) is caught by the bowl and returned to the annulus in its former fluid condition.

Rotors can be installed in various locations throughout the bowl to attain desired coverage of irregularly shaped work. A vapor pressure equilibrium is maintained within the bowl by simple baffles, vestibules or their equivalent, thus eliminating the need for exhaust equipment and insuring constant material viscosity.

The coating volume of each rotor system, read directly from an instrument, is independently controlled by a micrometer adjustment which can be varied any time desired.

A conveyor system moves work into, through and away from the machine.

Steffens, Jr.; Osborn Mfg. Co.

A. J. Steffens, Jr., has been appointed Sales Engineer for the Osborn Mfg. Co., (industrial wire brushes) Cleveland, Ohio. Mr. Steffens will cover North Carolina, South Carolina, Eastern Georgia and Florida. He will make his home in Westover Hills, Charlotte, N. C.

L. K. Scott is Elected V. P. of Jones-Dabney Co.

Lawrence K. Scott of Louisville, Ky., has been elected vice president of the Jones-Dabney Company, a division of the Devoe & Raynolds Co., Inc. He is also Director of Laboratories for Jones - Dabney, which operates product development and research laboratories in Newark, N. J., and Detroit, Mich., as well as Louisville.

Mr. Scott joined the Company in 1929 as a research chemist after receiving a B.S. in Chemistry from the University of Kansas and an MS. from Lehigh University. At Lehigh, he did graduate work on drying oils under the direction of Dr. J. S. Long, now chemical director of Devoe.

New Rust-Proofing Process

Recommended as a replacement for cadmium or zinc in many rust-proofing applications, superior corrosion resistance is credited to "Perm-Cote," a new phosphate coating material developed by Detrex Corporation.

When immersed in a solution of the material, iron and steel surfaces are chemically converted into a dark gray, uniform, dense, non-metallic phosphate coating. After rinsing, the highly absorbent coating is impregnated with a rust-proofing oil known as "Perm-Oil," giving the products a permanent corrosion-proof layer dry to the touch.

Standard salt spray tests indicate a resistance well in excess of the 36 hours required in U. S. Army Specification 57-0-2c, Type II, Class B.

Typical applications for "Perm-Cote" are: Metal fasteners, springs, hardware and hand tools, appliances, sheet metal parts, rockets, clips and links, shells, etc.

Full information, including tests made by government agencies and private industry, is available upon request to the Detrex Corp., Box 501, Detroit 22, Mich.

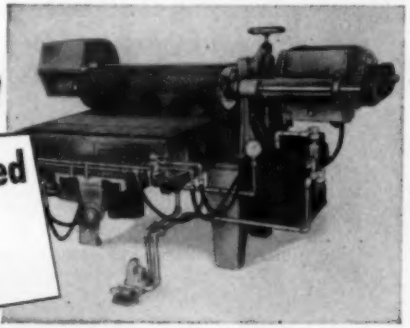
Heat Resistant Silicone-Base Finish for Metal Products

An improved heat-resistant coating, "Sicon", for such metal products as burners, engines, boilers, aircraft, ovens, electrical equipment and mufflers is announced by Midland Industrial Finishes Co., Waukegan, Ill.

According to the company's literature, "Sicon," after proper thinning with special reducers, is easy and fast

Precision

for improved surface finishing



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For efficiency in surface finishing products like these:

Screw Drivers
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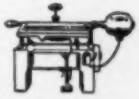

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Specialized Machine Equipment For Glazing and Polishing Operations

OLEAN, N. Y.

to apply by brush, spray or dip, requiring only a chemically clean surface obtained by any conventional method. The recommended thickness —minimum dry film—is 1.0 mil (.001 inches). "Sicon" is available in aluminum, black, ivory and beige. Other colors are available, limited only by the degree of heat resistance and other special properties required.

3-Color Work on Automatic Masking-Spraying Machine

A new, air-operated machine, for rapid automatic spray painting, of as many as three colors simultaneously on a variety of small parts, has been developed by Conforming Matrix Corp., 331 Toledo Factories Bldg., Toledo 2, Ohio.

Parts are fed into mask holding fixtures which are an integral part of the rotary table. The machine, illustrated herewith, is capable of a capacity of 18,000 completed pieces, painted three colors, each 8-hour shift. There are 24 masks, 8 for each color.

At top speed, the rotary table indexes 22 times per minute, with 90-lbs. pressure, attaining a perimeter speed of 50 miles per hour during the short 3-foot indexing travel.

Painting occurs while the table is at rest. After the painting on each color, the operators move the parts from one color mask to the next. No spraying can occur while the table is in motion. One operator removes the finished pieces.

Fourteen automatic spray guns are so mounted underneath the table as to be easily accessible for inspection and adjustment.

Properly placed baffles and an effi-

This machine automatically spray paints a variety of parts in three colors, one color after another. Painting is done from underneath the revolving table. Masks are at every station.

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Glidden specialists in the screen process field can show you the most modern and economical methods of applying any design in any number of colors on any type of surface. And, Glidden High-Gloss Screen Process Colors offer you:

★ Cleaner, more vivid colors
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DETRO MFG. & SALES CO., INC., CULVER CITY, CALIF.

Good Burning-in
REQUIRES
Good Knives

(Patent Applied For)

FASTER BURNING-IN, BETTER RESULTS WITH
the Wilkinson Knife

Made of just the right steel, ground and honed for proper concentration of heat. Easy handling—perfectly balanced like an artist's brush. Write for descriptive circular and prices.

Wilkinson Equip. & Supply Corp.
6958 S. Wentworth, Chicago 21, Illinois

cient exhaust system preclude the intermingling of colors on the parts as the three colors are sprayed simultaneously.

To maintain proper viscosity, the paint is continuously circulated from the containers through the guns, even when painting operations are momentarily suspended.

There are only three controls for regulating atomized air for the guns, the speed of cycling, and the amount of paint applied.

Snug fit of the pieces in the mask is automatically assured by air pistons. The table cannot index until the pistons release. The movement of the rotating table is then accomplished by a driving arm powered by air and hydraulically checked. The driving pin, in the driving arm, moves the table to its successive index positions as it engages on its forward thrust. A locking device aligns the table in proper gun position as the pin is retracted.

Masks, for a particular part or color, are so inserted as to be flush with the top of the working table. Spraying is from below, and against the masks, not from the top. Masks, accordingly, do not have to be cleaned as often as surplus paint falls away and is sucked off and exhausted out of the back of the machine. The operator holds the parts face down from above, exerting only manual pressure for proper sealing of pieces against the mask.

A. C. Towne Becomes President of Michigan Oven Co.

Mr. A. C. Towne., Jr., has been elected President of the Michigan Oven Co., Detroit, Mich. Mr. Towne was one of the founders of Michigan Oven Co. and has been the Buffalo District Manager since incorporation of the Company. He has also served as a member of the Board of Directors for the past two years.

Mr. Towne has appointed Mr. William Jarvis as General Manager. Mr. Jarvis was formerly associated with other oven companies in Detroit.

"Pearlcrome" a Metallic Finish Almost Like Chromium

A new bake finish that shows a smooth bright highly polished surface—almost as bright as chromium plating—has been developed by The Boydell Bros. Co., 432 E. Lafayette Ave., Detroit 26, Mich.

It will go 250 to 400 hours salt spray, about 100 hours humidity (100° F. at 100%). Abrasion resistance is equal to present automotive finishes.

The finish is available in a 2-bake and a 3-bake system. The 2-bake system includes two operations, the first being a spray coat with rust-inhibiting primer followed (in 15 to 45 seconds) by a light wet coat of Pearlcrome Slurry thinned one part P.S. to 11 parts xylol. This 2-coat job is baked.

Second, comes a wet coat of Pearlcrome Clear followed by baking (18 minutes at 270° F., to 45 minutes at 230°.

This bright, durable smooth bake finish has many possibilities as a decorative coating in the finishing of civilian products, where formerly plated metals were used.

Free Book, "Idea Generators"

Imaginative uses of plastics in business and industry are contained in a new booklet entitled "Idea Generators," just published by the Plastics Division of Monsanto Chemical Co., Springfield, Mass.

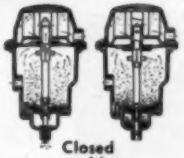
The publication consists of six case histories illustrating plastics' answer to "habit-itis," a term used by the company to dramatize the rut, frequently created by conventional, habitual patterns of thinking. Six manufacturers of products ranging from ovens to miniature organs relate typical product problems and the way they were solved through new ideas and new plastics applications.

NOW-get clean dryer, compressed air automatically

When dirty, wet air sends finishing rejects up, you'll find the Wilkerson Valve will reduce rejects to a minimum, increases production, reduce spray gun maintenance and replacement costs by its proved control of moisture, oil, rust, dirt and other contaminants ever present in compressed air lines.

Strong, corrosive resistant construction, fully automatic operation and one moving part are features that assure long, trouble-free life. Double O-ring seal transmits full force of air without pressure surge, holds pressure drop to a minimum.

12 page catalog yours on request.



Discharge position — Closed position.

ASK FOR DEMONSTRATION

If you use compressed air, ask for a demonstration in your own plant, on any compressed air application you choose.

WILKERSON CORPORATION

Manufacturers of automatic separators and drain valves for compressed air lines, tanks, sumps, after-coolers, and brake equipped trucks, buses and railroad locomotives.

1757 SO. BROADWAY DENVER, COLORADO

Fungus-Proof Decals

The "toughest" decals in the world are now also fungus-proof, according to information released by the Meyercord Co., 5323 W. Lake St., Chicago 44, Ill., decalcomania manufacturer. This special feature is being incorporated in all future runs of Meyercord's type C and type G mar-proof decals—those specially designed for high resistance to abrasion, moisture and temperature extremes.

Both C and G type decals were developed by Meyercord during World War II for heavy durability on military equipment. Millions were used as wiring diagrams, parts listings, instruction signs, insignia and nameplates on combat planes, tanks and field equipment. Scratch-proof, vibration proof and easily applied, even on crinkled surfaces, they were widely used wherever firm adhesion was necessary, saving valuable time, weight, labor and metals.

C and G fungus-resistant decals are durable and washable; complete immersion won't destroy their legibility or adhesion. They are not affected by acid, alkali, alcohol or petroleum products; available in all sizes, designs and colors.

Miracle Paint Mixer or Rejuvenator

A powerful compact machine for rapidly vibrating paint containers (up to five gallons in size) and their contents, operates in such a manner that it shakes up and remixes any settled solids in the paint or enamel. In other words it rejuvenates the contents of the container so the original perfect mixture, as placed in the can by the manufacturer, is restored.

Time required to rejuvenate the contents of a long standing 5-gallon can of paint or enamel is three to seven minutes depending upon the condition of the material.

Restores contents of long standing cans to their original perfect condition.

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Produces a high luster
on a variety of finishes

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Complete Technical Service At Your Disposal

SNYDER BROTHERS COMPANY
Manufacturers of Quality INDUSTRIAL LACQUERS
P. O. BOX 548 — TOCCOA, GEORGIA

The machine is practically noiseless; it operates in ball bearings. Different capacity machines of this type are available to handle containers as small as ¼-pint, and as large as a 55-gallon drum.

The Miracle Blue Boy is a product of Miracle Paint Rejuvenator Co., 128 E. 10th St., St. Paul 1, Minn.

"Nacromer N.N." for Metallic Finish

The Mearl Corporation, 153 Waverly Place, New York 14, N.Y., producer of pearl essence, announces a new type of Nacromer called "Nacromer N.N.", which is a substitute for pearl essence. According to the announcement a new method of production has been developed which has enabled this firm to offer the new synthetic pearl essence which is concentrated, non-corrosive, stable and extremely economical to use.

Nacromer N.N. is suggested as a formulated substitute for a variety of simulated metallic finishes including gun metal, gold, brass, bronze, copper and silver. These metallic finishes can be produced faithfully and with attractive luster.

T. J. Mitchell, Du Pont's New I. S. M. in Chicago Region

Appointment of Theodore J. Mitchell as industrial sales manager of the Finishes Division of the Du Pont Company in the Chicago region, has been announced.

Mr. Mitchell, originally from Little Rock, Arkansas, joined Du Pont at Tulsa, Oklahoma, in 1926, and has spent much time dealing with paint problems of the aviation and railway industries. He was made regional transportation sales manager at Chicago in 1945, assistant regional industrial sales manager there in 1948, and went to San Francisco in July, 1949, as regional industrial sales manager. In his new position in Chicago he succeeds Whitney S. Robertson, who was promoted to assistant manager of industrial sales of the Finishes Division in Wilmington.

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We make nothing but Thinners—blended Solvents, and nothing else. Naturally, we buy large quantities of solvents—at lowest prices. *Specialization* saves us money on overhead too—and these savings we pass on to you, our customers.

We know how to formulate Thinners to your requirements—been doing it for 26 years. We've satisfied big and little customers . . . let us show you how a Lacquer Thinner *SPECIALIST* can supply you with the *right* Thinner . . . and still save you money.

Just fill out form below and mail today. We'll work out a Thinner *especially for you*, and send a sample. Think we can do it for 85¢ or less a gallon too!

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CORTLAND, N. Y.
THINNER SPECIALISTS

The product we make is:_____
We use Lacquer Thinner for:
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We use Lacquer Thinner on:
☐ Metal ☐ Wood ☐ Other_____
We want it to dry:
☐ Fast ☐ Slow ☐ Medium

Name_____
Address_____
City_____ Zone____ State_____

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B. A. U.

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You'll Rate Duralac

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in supplying the following to exact specifications, government or civilian.

- Lustreless, semi-gloss lacquers
- Wrinkles
- Primers
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- Specialty Products

SEA-LAC

Duralac Chemical Corp.

84 LISTER AVE., NEWARK 5, N. J.

"Wipe-Off" Metal Cleaner

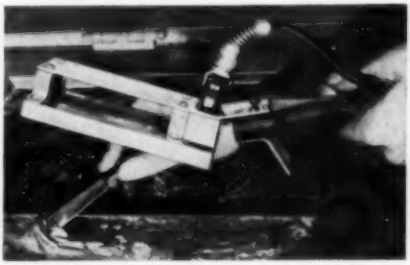
Perfected and now ready is a new wipe-off metal cleaner that not only removes rust, grease and oil completely but at the same time leaves an iron phosphate coating which provides a firm bond for all types of paint. This dual purpose product is said to be very simple to work. Apply with brush or steelwool, scrubbing if necessary, wipe off with a cloth, allow to dry 5 to 10 minutes, then paint.

The cleaner is named "metal-redi" and is manufactured by Westville Laboratories, Monroe, Conn. Complete information will be sent to all who are interested in improving and speeding up cleaning and painting operations.

Electrical Paint Remover

A new, improved and safe electrical device for the removal of paint or other finishing material is now being manufactured by the B & L Tool & Machine Co., East St., Plainville, Conn. Usable anywhere by amateur or professional, it operates on flat, curved or irregular surfaces; weighs less than 2 lbs.

On flat surface exteriors, paint can be removed at the rate of about 2-sq.ft. per minute. Localized removal of paint is possible without affecting surrounding paint. The heated area measures 3½ x 5¾-in.



Removes paint, varnish, lacquer electrically.

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The New Period trade mark is your assurance of highest quality. Behind every New Period product stands years of experience, dependability and integrity.

- Fillers and Stains
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Write for 5-gal. Working Sample at Drum Price.

MANUFACTURERS OF FINE WOOD AND METAL PRODUCTION FINISHES

NEW PERIOD Production Finishes

ESTABLISHED 1917 NEW YORK WOODFINISHERS' Supply Co. 109 IMLAY STREET BROOKLYN, N.Y.

Machine Cleans and Pickles Steel Cartridge Cases

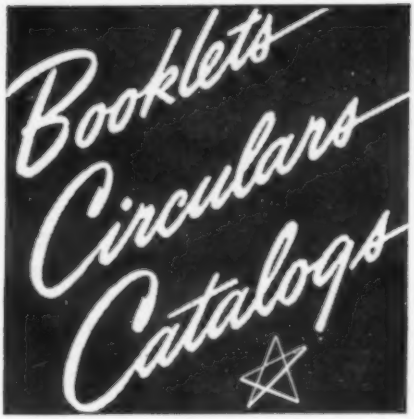
A process that cleans steel cartridge cases much faster than conventional methods is announced by The B. F. Goodrich Co., Akron, Ohio. The cleaning process is one of the important steps in the manufacture of shells for the Ordnance Corps.

The new system is the defense version of a continuous process for cleaning and pickling steel. Known as the B. F. Goodrich-Curran automatic spray pickling machine, the process is used commercially to mass produce such metal articles as bath tubs, refrigerator liners, panels for electric and gas ovens, fluorescent light reflectors and automatic washing machine liners and tubs.

Switched by re-design to production for defense, the new system handles the larger sizes of artillery and mortar shell cases at a high production rate. The equipment is the first Curran pickling machine designed specifically for pickling steel cartridge cases.

Development of the new process is especially significant at this time because, due to the critical copper supply, most of the larger calibre ammunition produced in the U. S. in the future will be made with steel cases rather than brass, as used in World Wars I and II. Equipment needed for the new process is lined with rubber which withstands the highly corrosive action of the pickling acids used.

GLUE-RITE No. 20
for weatherproofing animal glues used on government work.
For information, write
THE LIQUAFILL MFG. CO.
823 Richard Street Dayton 3, Ohio



Flame-Failure Protection

"Protectoglo Combustion Safeguard for Industrial Gas-Fired and Oil-Fired Burners", Catalog 9601, has recently been published by the Minneapolis-Honeywell Regulator Co., Industrial Division, Wayne and Windrim Aves., Philadelphia 44, Pa. This 32-page catalog is actually a complete manual on flame failure protection for industrial applications.

Merits of Heat-Resistant Finish Revealed in 4-page Bulletin

Printed in black, red and aluminum, a new 4-page illustrated bulletin gives performance stories, resistance tests and other practical information about "Sicon", an improved heat-resistant finish developed and manufactured by Midland Industrial Finishes Co., Waukegan, Ill.

Data on Heat Transfer Problems

New laboratory data on the use of Platecoils as a medium of heat exchange is now available in a new technical manual published by the Platecoil Division of the Kold-Hold Mfg. Co., Lansing, Mich. This technical data is based, in part, on the results of an extensive research program conducted by the Batelle Memorial Institute, Columbus, Ohio, involving all styles and sizes of Platecoils.

Vapor Degreasing Handbook, Free

A new 21-page handbook on vapor degreasing of metal parts has been published by the Phillips Mfg. Co., 3475 W. Touhy Ave., Chicago, Illinois. The handbook answers most questions generally asked about vapor degreasing, completely covering the subject of what vapor degreasing is and to what types of materials and manufacturing vapor degreasing can be applied. Numerous photographs of various types of units, along with useful data charts, are also included in the booklet.

The book is offered free to anyone interested in the cleaning of metal parts.

Fire Fighters' Manual

A civil defense edition of a training manual for fire fighters has just been released by the National Fire Protection Association. This 176-page edition, "Handling Hose and Ladders," contains over 300 photographs and brings to the fire service in one volume a step-by-step pictorial description of accepted practices for handling fire hose and fire department ladders. Address: National Fire Protection Assn., Publications Service Dept., 60 Batterymarch St., Boston 10, Mass. $1.50 per copy. Discount for quantity.

Fires; Too Many; Too Costly

In the past 50 years 133 conflagrations in the United States and Canada have killed 1274 people and destroyed 40,000 buildings and other property valued at $785,000,000. These statistics were taken from a detailed report on conflagrations published by the National Fire Protection Association, a non-profit fire-control group, in the pamphlet "Conflagrations in America Since 1900."

This pamphlet discusses the characteristics of conflagrations, describes the conditions that breed them, and devotes sections to forecasting, fighting and preventing conflagrations, with more than 50 pictures to illustrate. Several tables are included, among them a list of all conflagrations in North America since 1900, with factors responsible indicated in each case.

Copies of this 64-page illustrated pamphlet may be obtained from the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass. Single copies $1.00. Discount for quantities.

Industrial Lighting Booklet Free

Increased demand for better industrial lighting is reflected by a new 16-page lighting-at-work booklet available from the Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

Aimed at the industrial plant operator, this booklet stresses three ways that better lighting can work for him: 1) it can cut cost by making possible increased production; 2) increase efficiency by ensuring accuracy; 3) reduce accidents by clearly exposing dangerous operations.

In emphasizing that different opera-

tions in a plant call for varying amounts and types of light, this booklet analyzes the three modern light sources (fluorescent, mercury vapor, incandescent) as to type of light, efficiency, lamp life, maintenance, mounting height, and job suitability. Illustrations of various luminaries of each type of lighting are presented, along with wattage and lumen output ratings.

Special lightings for special areas is illustrated, such as dust- and vapor-tight units for service in corrosive atmospheres, and bin and stack luminaires that direct light into bins and stock rooms.

New Color Book, 50 Cents

A new and full-color illustrated book of 24 pages, 11x8½-in., bound between heavy lacquered paper covers, reveals practical and interesting information about Light and Color, Color Analysis, The Red Family, The Pinks and Tans, The Yellow, Green and Blue Families, Color Definitions, Color Systems, Color Applications, and The Correlation of Source and Surrounding Color.

Copies of the new "Color Is How You Light It" book, Number FL-420, may be secured from the Advertising Department of Sylvania Electric Products, Inc., 87 Union St., Salem, Mass., at 50 cents a copy.

Facts About Viscosity Free

Brookfield Engineering Laboratories, Inc., Stoughton, Mass., offers to readers of this magazine the "Brookfield Viscosity Packet" which is designed to provide complete up-to-date information about both Brookfield Viscometers and the general subject of viscosity.

This entire group (8-page catalog, Data Sheet 034, 1951 Price Lists, "What Users Say" brochure, etc.) together with any article reprints in the firm's files, which the inquirer would like to have, will be forwarded to any readers who request a "Brookfield Viscosity Packet".

Requests for this new Viscosity Packet should be addressed to the Brookfield Engineering Laboratories, Inc., Stoughton, Mass., attention of Mr. Wm. B. Brookfield, President

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Free Spray Painting Classes

The following schedule of classes in industrial spray finishing methods at the School of Spray Painting operated by the DeVilbiss Co., Toledo, Ohio, is again offered, on the company's long established policy of making no charge for instruction: July 16, August 13, September 17, October 15, December 10.

Users of DeVilbiss equipment may make application now to enroll their spray operators, shop superintendents and service managers for any of the one week courses scheduled.

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VERSATILE
CLEAR METAL LACQUER
SPRAYING
for DIPPING
TUMBLING
HIGH GLOSS
PERSPIRATION RESISTANT
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Industrial FINISHING Editorial

Waste Utilization an Aid to Industry

John K. Knighton, general sales manager of Servel, Inc., has called for an intensified program of industrial research channeled toward studies of salvage of wasted resources, as well as wasted materials.

"If successful, the results could well be a storehouse of savings in cost and a wider availability of materials to continue production," he said.

Pointing out that no waste is without use, Mr. Knighton declared that industries which devise the most ways to take advantage of the use of alleged wastes stand the best chance of maintaining high levels of production in these days of rising costs.

He advised industrial researchers to take these steps:

1) Investigate what resources and materials are being wasted.

2) Decide whether the wastes can be re-used in manufacturing, or whether they may be applied to subsidiary processes. Determine whether such a move would extend the use of prime materials to help reduce the cost of production.

3) Release the findings so that all industries may benefit in increased productivity, and the public may benefit through continued availability of improved products.

As an example of what has been done in the field of utilizing wasted materials, he pointed to a Tennessee factory that has always had waste wood scraps from its pencil manufacturing operations.

"Now, that factory uses the wood shavings to produce steam for an air conditioning unit and the resultant year-round humidity control reduces wood warpage and cuts down loss of prime materials."

In addition to effecting savings on both prime materials and on fuel, the company also effected a saving in its expense for the disposal of materials once considered waste.

Iron and Steel Scrap Needed Now

The National Production Authority, U. S. Dept. of Commerce, is urging everyone, and particularly those in industry, to seek out dormant iron and steel scrap and place it in normal channels, usually with junk dealers, through which it will eventually reach steel mills.

NPA's accelerated scrap program is designed to round up as much dormant scrap as possible. "Dormant" scrap is defined as obsolete machinery, tools, jigs, dies, fixtures and other equipment, including items that are broken, worn beyond repair, abandoned or in need of parts that can no longer be obtained.

The immediate collection of scrap is necessary for two reasons: 1) Steel mills are operating on a dangerously short supply, with some on hand-to-mouth or day-to-day basis. 2) The mills not only require more scrap for immediate consumption, but also need substantial inventory increases to carry them through the winter months when collections fall off.

Last year 29,500,000 gross tons of purchased scrap were consumed in making steel. The estimate for 1951

Positive action of BARRETT TYPHOON CENTRIFUGAL WASHERS provides for quick, thorough parts cleansing

In these efficient centrifugal machines the washing solution enters the top of the whirling load under valve control. The operating principle—being that of a typhoon—gives the washing solution a spraying, swirling, and surging action which thoroughly permeates the contents. During this action, centrifugal force creates hydrostatic pressure within the work container. That proportion of the deluge going to the bottom is forced up the side and out carrying off the contaminated fluid.

A thorough, quick cleaning is definitely assured by flowing sequence. Two or more liquids may follow, making it possible to wash, rinse or provide any further treatment as required.

Several Barrett installations involve the use of four machines operated by one man who loads and unloads in three minute cycles. Washing time is only one minute. Another type of set-up provides for recovering oil, washing, drying, and coating with rust-proofing material.

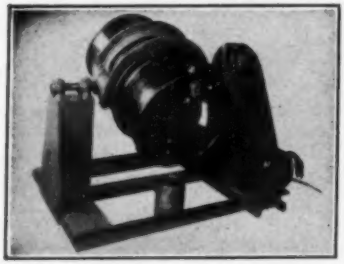
As in all Barrett Centrifugal machines, provision is made for convenience and safety of operation.

Send at once for details of Barrett Typhoon Washer

THE LEON J. BARRETT COMPANY
Designers and Builders of Centrifugal Machinery
1703 GRAFTON ROAD WORCESTER 1, MASS.

DRUM TUMBLER

... for mixing materials in suppliers drums



Will tumble any drum end over end at 30 rpm. Detachable crank on end of motor shaft makes it possible to turn down into any position for testing contents or draining. Portable ramps for fast insertion and removal of containers.

ASSURES:
- Uniform mix
- Easy inspection during operation
- Withdrawals in any quantity needed.

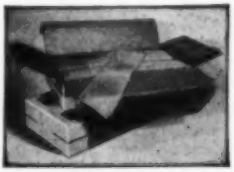
AVOIDS:
- The fire hazard of open drums
- Contamination of one product with another
- Cleaning of equipment between mixes
- Residual sludge

Send for descriptive literature!

THE VOL-U-METER CO., P. O. Box 54, Buffalo 16, N.Y.

NOW! Tack Cloth in Handy Rolls *or* Cut Bulk

Cut off any size piece and use as needed.



Already cut and folded, ready to use.

Now you can get Tack Cloth packed the way it's easiest for you to use—either in 150 yard rolls of 36" wide cloth or in handy cartons—100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will **stay** SOFT and TACKY until the very last bit is used up.

The Cut Bulk size is 18" x 36"—folded to 4½" x 18" for easy handling. **All of our Tack Cloth is Spontaneous Combustion-Proof, Lint-Free and Wax-Free.** It's clean and sanitary—there's no waste.

Write today for complete information, prices and samples.

Baughn Chemical Products Company
"The Tacky Wiper Specialists"
7027 N. RAVENSWOOD CHICAGO 26, ILL.

Also Individually Packed in Glassine Envelopes —144 to the Carton.

A WARRANTY OF SATISFACTION IN EVERY CARTON

Mac's **FASHION CRISTALITE** *LACQUERS and SEALERS*

Are especially formulated for the light blonde or bleached finishes. They are "water white" and do not impart any color to the surface.

They have high solids content and produce excellent body. They will not mar or scratch readily and can be sanded in one hour.

Mac's Cristalite Lacquers are available in various sheens.

Write for samples and descriptive folder.

The Lawrence-McFadden Co.

Headquarters for Fine Finishes Since 1875
7430 STATE ROAD *"Our 76th Year"* PHILADELPHIA 36, PA.

is 32,500,000 gross tons, or an increase of 3,000,000 gross tons. In 1952 an additional 3,000,000 tons of purchased scrap may be required.

Steel is made from approximately one half scrap and one half pig iron. The reason scrap is used to make new steel is because it adds to the quality and helps keep the cost down. Because scrap is composed of iron and steel, the refining process is shortened and perhaps made more complete. For every ton of scrap used, this country conserves approximately two tons of iron ore, one ton of coal, nearly two tons of limestone, and other materials.

How Spray Pressure "Balances Up"

There is a definite balance between air pressure used for atomization and the amount of material fed into the spray gun, based upon the viscosity or solids content of the material to be sprayed. Manufacturers of finishing materials can inform you the correct pressure ranges to use to completely and satisfactorily atomize the volume of material supplied to the gun at a definite fluid pressure. Once established this balance should be maintained.

Under ideal conditions there should always be an ample supply of compressed air available. However ideal conditions do not always prevail. Sometimes the air pressure drops. When this occurs it is not necessary to shut down the finishing room completely. If the correct balance or ratio is maintained between atomization and the material that is fed into the spray gun, then work can proceed on a reduced basis. Conveyor speed will have to be reduced and production will be retarded, but it need not be stopped until normal air pressure can be again maintained.

S-Y TRADE MARK *Sealers*

A higher quality finish at lower finishing costs is assured in the application of S-Y Sealers. They are tougher, provide greater adhesion, dry faster, sand easier. If your present sealer falls short of these characteristics, it will pay to get in touch with us.

Phone—Write—Wire!

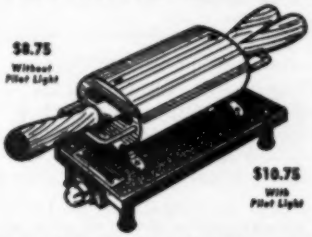
STILLE - YOUNG

Manufacturers

CHICAGO 14

No String Tied To This—

If You Use OP-AL



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STANDARD FOR OVER 25 YEARS

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A Protective Hand Cream Especially Formulated

for . . . Persons handling Polishes, Paints, Varnishes, Lacquers, Stains, Inks and Adhesives.

- Does not irritate, dry or crack the skin.
- Readily removed with soap and water.

FREE!! FULL SIZE SAMPLE.

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COMPO CHEMICAL CO.

Incorporated

MANSFIELD, MASS.

DISTRIBUTORS WANTED: Good territories open to men calling on finishing field.

Spe-de-way

WOOD BLEACH

This single operation, controllable, Patented Bleach

- Requires No Neutralization
- Does Not Raise the Grain
- Leaves No Deposit
- Wood Is Left Neutral
- Economical . . . Dependable

Gallon Unit makes two gallons of bleaching solution. Application by spray or synthetic rubber sponge. Wood is ready for finishing in less than two hours.

Delivered prices quoted on request.

Spe-de-way Products Co.

manufacturers

3639 N. Columbia Blvd., Portland, Ore.

Prepare Surface for Perfect Finish

Before beginning to finish TV cabinets or furniture or any other fine wood products, the surfaces must be smoothly sanded. In most cases final sanding is done before the pieces go to the finishing room. Even though final sanding has been performed after assembly, pieces are again sanded just inside the entrance to the finishing room to assure a smooth, clean surface.

Now the thorough removal of all sanding dust is of equal importance. It is in this cleaning operation that some plants are deficient. The sanding job is never good, nor is it completed until the dust is thoroughly removed. This applies especially to porous, soft textured woods such as mahogany and gum. On close grained, hard textured woods such as maple and cherry the dust remains on the surface where it can be blown off and wiped off more easily.

For a clear, clean, quality finish it is often advisable to place a consci-

Did you ever think maybe you just weren't cut out for this kind of job, Hubbel?

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DEPENDABLE INDUSTRIAL FINISHES

Established 1870

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- Varnishes
- Specialties

Barrett Varnish Company

1532 SOUTH 50TH COURT

CICERO 50, ILLINOIS

entious, efficient clean-up operator just outside the stain booth, or before the stain dip tanks. This operator will have an air hose with sufficient air pressure to blow all of the dust out of the wood pores, as well as off the surface. Then he follows with a thorough wiping with tack rags to which any remaining dust will cling instead of flying into the air and settling back on the work. With a thoroughly clean as well as smooth surface, stain and filler will fulfill their intended functions, and a quality finish will be obtained. I costs only a little more to do the job right.

Zehrung Chemical Co., Seattle Represents McCloskey of N. W.

McCloskey Varnish Co. of the Northwest, Portland 10, Oregon, announces the appointment of Zehrung Chemical Co., 1500 Westlake North, Seattle 9, Wash., as sales representative on bulk varnishes.

Metallic Finishes Used on Available Materials

With the increasing scarcity of so many non-ferrous metals for utility and decorative uses on civilian products (for example, brass, bronze, copper, chromium) more concerns are turning to various types of metallic finishes to produce the rich appearances desired. Fortunately, a wide selection of metallic finishes are available. Several manufacturers of finishing materials can supply metallic finishes that are smooth, lustrous and durable.

Some of these finishes are in color to give such effects as gold, brass, bronze, copper, gun metal and chromium. Some add a metallescent effect to various bright and subdued colors. Others give a pearly appearance through the skillful use of natural or synthetic pearl essence. Still others are clear but very durable to pre-

serve a natural or simulated bright metal surface which, without this protection, would quickly tarnish or discolor and perhaps deteriorate.

Recent and current issues of this publication contain both advertising and editorial mention of many new and improved metallic finishes that can be used effectively on a variety of civilian products.

Small Plants Have More Accidents

The graph of industrial accident rates in this country is a ski-slope picture—injury rates sliding downhill fast through the 1920's, evening off on fairly level ground through the 1930's to the mid-1940's, a modest dip since World War II.

What will start the rate downhill fast again? The National Safety Council thinks the answer is to convince small business that accident prevention pays off. Big business learned that lesson many years ago. Today, more than two-thirds of all industrial injuries occur in businesses with fewer than 100 workers!

As the opening gun in a stepped-up effort to interest small business in the economic and social benefits of accident prevention, the National Safety Council is distributing a 24-page illustrated booklet, "Safety Pays the Smaller Business."

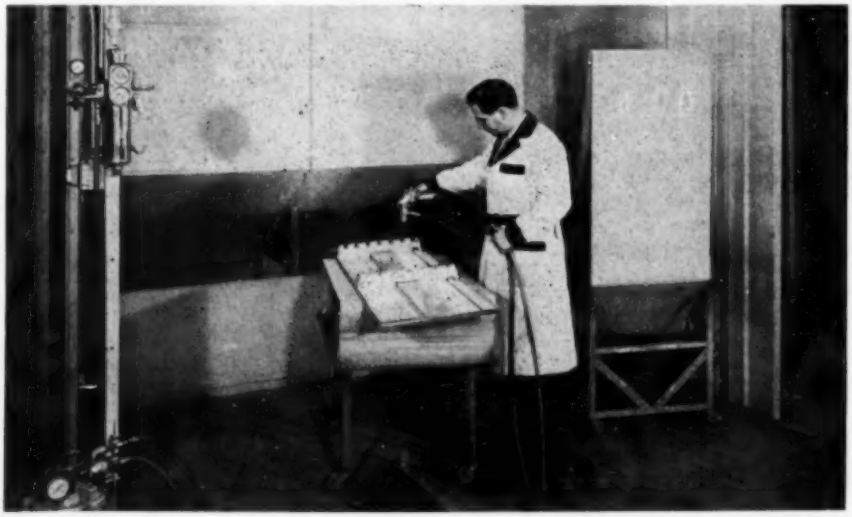
The initial distribution will be through insurance companies. However, readers of this magazine can get a free copy by writing a request to the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

DeVilbiss' New Building Serves Customers

A new building of 10,000-sq.ft. floor space, recently completed by The DeVilbiss Co., manufacturer of spray painting equipment, Toledo, Ohio, contains three important divisions of interest and value to the company's present and prospective customers.

They are a new display sales room, a customer research department, and the customer school of spray painting.

The show room is designed to reveal



Spraying a customers' product in water wash spray booth in new customers' research building.

the company's equipment in proper relation to the job it does, and from all vantage points, with sales and engineering men at hand, ready to demonstrate.

Equipment not found on the sales floor is readily available in the research center. Here engineers and facilities are available to solve any problems that may arise in connection with standard or special materials, equipment or products to be painted or finished.

In another section of the building is the spray painting school. There is one classroom where "students" are given lectures and have an opportunity to study the theory of spray painting and of spray equipment through the medium of visual education. Adjacent to the classroom is a spray painting room. Here "students" can put theory to work under actual conditions.

The school is staffed by skilled instructors who teach everything from the assembling and selecting of equipment to the using, cleaning and storing of equipment after a job is completed.

Checking methods of testing new silicone alkyd coating resin are Dr. Harold Hoppens (left) and B. H. Kress of the coating resin research group, Plaskon Division, Libbey-Owens-Ford Glass Co., Toledo, Ohio. Hoppens, who heads this field of research for Plaskon, holds a truck exhaust pipe that has been in regular use for six months while coated with an aluminum paint based on Plaskon's new silicone alkyd resin 881. The unaffected finish on the exhaust pipe is being compared with similarly coated pipes that have been subjected to a heat of 1500°.

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"Wood Graining" ADDS Eye Appeal

American Graining Plates are photographic reproductions of fine woods.

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DUST-ALL Tack Rag

for better, cleaner finished jobs

Remove the specks, lint, dust from surfaces to be painted; wipe them off with a Dust-All Tack Rag; be sure of fine, blemish-free, finished jobs.

Get the Dust-All Tack Rag in the familiar Red Checkered Bag; also available in 150-250-500 yard rolls.

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Lacquers • Enamels • Dopes • Thinners
Clear Metal Finishes • Colored Lacquers
Clear S.G. for Metal • Texture Enamels
Specialized Production Finishes
Aircraft Finishes

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RANDOLPH
PRODUCTS CO.
CARLSTADT, NEW JERSEY

Random Comment on the Industrial Scene

(Continued from page 8)

search Society 1951 International Industries Show in Philadelphia, the desk top is economical to produce, structurally strong and resistant to impact, abrasion, moisture, flame and most chemicals.

The abrasion-resistant surface sheet with a beautifully grained effect is easy to wipe clean with a damp cloth. Bakelite laboratories have developed special phenols and urea resins for practically any variety of wood residue molding and masking sheet or crossband impregnation. These enable molders to make products such as furniture parts, structural components, brush handles and any other items of superior quality from wood that might otherwise be wasted.

* * *

Resorcinol. Heyden Chemical Corp. has completed plans to triple production of resorcinol, an essential ingredient in waterproof glue and adhesives for wood, in resins for rubber and tire cord sizing and other products urgently needed for aircraft, ships, prefabricated building construction and other key defense uses.

* * *

Shortage of Executives. Industry is likely to be faced with a shortage of executives, says C. R. Sheaffer, president of W. A. Sheaffer Pen Co., in his annual report.

"A plant can be built of bricks and mortar once the green light has been given to go ahead," Sheaffer said. "It is not as simple to obtain men with vision, loyalty, skill and determination. Their talents, so eagerly sought throughout American industry, create an active market. In this field, supply never catches up with demand."

KEEP BOOTHS FIRE-SAFE THIS LABOR-SAVING WAY

WITH

LIQUID ENVELOPE

PEELABLE SPRAY-BOOTH COATING

Using expensive labor to scrape down spray-booths costs a lot more than peeling off accumulated overspray in big sheets. Safer, too. Order a 5-gallon Test-Sample at Drum Lot price.

BETTER FINISHES & COATINGS, INC.

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122 East 7th St., Los Angeles 14, Calif.

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General Spray Equipment Co., Boston, Mass.

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Paints & Lacquers, Inc., Chicago, Ill.

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C & H Supply Co., Seattle, Wash.

Hugh Russel & Sons Ltd., Montreal & Toronto, Canada

Industry needs experienced men capable of managing the business just as much as it needs experienced operators who punch time clocks. One is dependent upon the other. Without successful steering there would be no need for time clocks.

* * *

Resinous Alcohol-8, a new compound that combines the properties of a plasticizer and a resin, is announced by General Mills Research Laboratories, Minneapolis, Minn. It is the youngest member of General Mills' Resinous Alcohol family, first reported to the protective coating industry in September, 1950. General Mills claims that it will effectively plasticize nitrocellulose lacquer films and at the same time improve their adhesive qualities.

New Report on Importance of Lighting

A new report, prepared as a public service by The National Information Committee on Lighting, summarizing the vital present-day services of illumination in American industrial production, in public safety, in research and education, and in government, has recently been published.

The 24-page report titled, "Lighting and The Nation's Welfare", involved extensive research.

Illumination is indispensable to efficient production. Production increases by as much as 30% have been achieved by proper light. Illumination also reduces eye strain and fatigue as shown by a decrease of 30% in one plant for headache tablets following installation of proper lighting. The importance of proper light in quality control is evident in typical reports showing a decrease in production errors up to 50%. Lighting also assures the safety of production workers both as regards machine operation and movements from one location to another.

Single copies of the report are priced at 25 cents. Write to National Information Committee on Lighting, 1410 Terminal Tower, Cleveland 13, Ohio.

YOUNG BROTHERS OVENS
for baking and drying

Designed and built to produce the finest results in baking processes such as PAINT FINISHING, METAL DECORATING, INSULATION BAKING. Batch or Conveyor Types for any fuel. Write for Bulletin 3.

YOUNG BROTHERS CO.
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PEARL ESSENCE

An entirely new Pearl Essence made from natural marine products. Price per one pound jar, $6.75, f.o.b. Wilmington.

Sample sent upon request.

IRIDESCENT PIGMENT CORP. of AMERICA
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TOMORROW'S Products Tested TODAY

A service to aid industry in producing longer-lasting and better-looking products. Quick predetermination of durability and permanency by actual exposure test in South Florida. Write us today for full information.

SOUTH FLORIDA TEST SERVICE
EST. 1931
4201 N. W. 7th St. Miami 34, Fla.

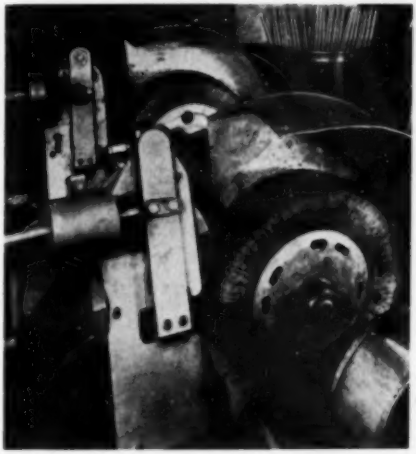
Power Brushing Setup Cleans Golf Shafts

This power-driven rotary wire brushing setup cleans surfaces of metal rods, tubes and pipes.

A 20% INCREASE in production, plus a uniform surface finish prior to plating, is now being obtained by a large midwest sporting goods manufacturer by utilizing a new power brushing method.

A five-station machine using "Fascut" rotary wire brushes is solving the problem of removing heat-treat discoloration and surface imperfections from tapered golf shafts.

Due to the tapered "step-down" design of the cold-drawn, heat-treated, alloy high-carbon, seamless steel shaft, it was a problem to get into the "step-down" corners. With the former method, two or three passes were necessary to do the job.



A close-up of the power driven wire brushes along with accessories for safely guiding and applying pressure to the rotating tubular metal rods that are put through this 5-stage setup to clean off discoloration resulting from heat treatment.

With the present brush method, only one pass is required to turn out a better finish at a rate of over 1500 shafts per 8-hour shift, or 10-ft. of shaft per minute.

A 5-station power brushing setup for removing the heat-treat discoloration and surface imperfections from tapered "step-down" golf shafts. The same or a similar setup could be used for cleaning or wire brushing other metal rods, tubes or piping.

The shaft is hand fed into the first station. A power infeed keeps it moving until it passes the last brush. The first station breaks the discoloration; rotary wire brushes, set up as shown here, prevent any "bridging" at the "step-down" corners.

Story and pictures supplied by The Osborn Mfg. Co., 5401 Hamilton Ave., Cleveland, Ohio.

Free Bulletin on New Wax

Technical Bulletin No. 222, "Syrex 200, Properities and Formulations," is announced by Velsicol Corp., 330 E. Grand Ave., Chicago 11, Ill. Detailed are chemical and physical properties of the firm's Syrex 200 lustrous wax for use in polishes, protective coatings, etc.

PAINT STRIPING TOOL

Works Like a Fountain Pen

FEEDS PAINT TO MAKE CURVED OR STRAIGHT LINES

Simply fill Tubular Glass Paint Fountain with paint or lacquer and Knurled Wheel Tip feeds paint evenly! Tips interchangeable. Master Paint Striping Tool complete with 1/16" tip, $1.00. Other complete tools with 1/64", 1/32" 3/64", 5/64", 3/32", 1/8" widths, $1.50 ea. Extra tips $.75; complete kit with tool and 7 tips, $5.00. Used by industry on production striping. See your dealer or order direct today.

WENDELL MFG. CO.
Dept. 96
4234 N. Lincoln Ave.
Chicago 18, Ill.

USE FOR STRIPING

- FURNITURE • TOYS
- BICYCLES • BOATS
- SCOREBOARDS
- LAMPSHADES
- AUTOMOBILES
- CERAMICS and for adding new beauty to all painted objects.

RESTORE PAINT IN 2 MINUTES

PER GALLON WITH

MIRACLE BLUE - BOY

5 GALLON PAINT REJUVENATOR

Paints, lacquers and enamel products can be restored to their original consistency without opening the can. Units available to handle from ¼ pint to 50 gallon drums. Immediate delivery.

Originators of paint rejuvenating equipment---sixteen years—thousands of satisfied users.

Write for folder & prices

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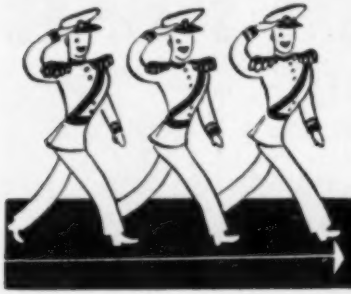

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and superior quality
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wrinkle finishes
under any baking condition.
For your best wrinkle finishes in 28 colors write to
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NEW GLOSS

A MODERN frenching material for fast production schedules. No longer is it necessary to use yesterday's french polish formulations in today's modern repair and touch-up operations.

WILKINSON'S NEW GLOSS is self lubricated. Now, even the novice repair man gets "master finisher" results.

Wilkinson's NEW GLOSS

- Builds Fast
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FOR STRAINING LACQUERS, ENAMELS, PAINTS OR VARNISHES.

Made of heavy paper stock with cloth inserts in coarse, medium, fine or extra fine mesh. 6" in diameter.

LOUIS M. GERSON CO.
BOX 175 MATTAPAN, MASS.

Cleaning; Rust Proofing Quickly; Effectively

By Bert Doggett
Paint Supt., Ironite, Inc.

PAINT FAILURES on the popular Ironite Ironer have been reduced to a minimum by the use of a new type phosphating cleaner, which cleans the metal and deposits a tightly adherent phosphate coating at the same time. This coating not only retards rust, but provides an excellent bond for industrial finishes.

Cleaning, surface conditioning and rinsing are performed in a 3-stage washer. After the metal is cleaned and phosphate coated it is given a hot water rinse, and finally a chromic phosphoric rinse. The temperatures we use are between 170° F. and 180° F. The chemicals are not critical and do not break down at these high temperatures.

We are processing over 5000 painted pieces per day.

Following recommendations of the manufacturer, we use the phosphating cleaner in concentrations of one to two ounces per gallon of water. The material is non-toxic, non-fuming, and requires no special care in handling.

Normally, the cleaning and surface conditioning process requires about one minute, but when surface rust is apparent, the length of this

treatment is increased to four or five minutes. Rust spots may still be visible, but our experience in the reduction of paint failures indicates they have been passivated.

Klem Chemicals Makes Currier Co. It's W. Coast Representative

Klem Chemicals, Inc., 14401 Lanson Ave., Dearborn, Mich., announces appointment of the Currier Company as west coast representative for its line of metal cleaning and conditioning chemicals.

The Currier Company maintains offices in Seattle and Denver; and warehouses in Oakland and Los Angeles. The firm designs and builds degreasing and metal washing equipment; also spray booths and conveying systems.

IDEAL TACK RAGS
FOR A PERFECT FINISH
Immediate Delivery
IDEAL CHEMICAL COMPANY
1689 Lee Road Cleveland 18, Ohio

CLASSIFIED ADVERTISING

FINISHING FOREMAN.

Manufacturer in Pennsylvania requires expert finisher on wooden television cabinets. Capable of handling large finishing department and at least 100 men. Must have knowledge both technical and practical in all finishing phases. Good salary. In reply, give full and complete details and references. Address IF-793, care Industrial Finishing.

COATING FORMULATOR WANTED.

Young man with B. S. or equivalent, with two to five years' experience in formulating organic finishes. Work to involve sanitary coatings for food containers. Salary commensurate with ability. Address IF-814, care Industrial Finishing.

DECORATING FOREMAN WANTED.

Experienced in lustering, spraying and silk screening glassware. Plant located in west Pennsylvania. Write a detailed account of work experience, salary required and availability. Address IF-815, care Industrial Finishing.

No. 150 **SpeedWay Speed Sander** *Sands, Rubs, Polishes*
. . . FOR DRY OR WET FINISHING
Motor-Driven 3/16" Orbital-Motion

Powerful, direct-connected (no gears), 3450 r.p.m., 100-120 v AC air-cooled motor. All sealed ball-bearing construction. Die-cast aluminum housing, polished. All-position handles. In hand weight only 5 lbs. Insulated with ground wire for wet as well as dry sanding or rubbing. Available accessories—deep contour pads, surface plates, felts, etc. Takes any sheet abrasives—3 covers 4½" x 6½" from standard 9" x 11" sheet.

A time saving quality tool priced so every worker can have one.

Write for Circular

SpeedWay MANUFACTURING CO.
1886 So. 52nd Ave., Cicero 50, Ill.

$34.50

POSITION WANTED.

Finishing Production Supervisor. 20 years' experience, all phases of organic finishes, including pearlizing and hot lacquers. Can handle any number of employees. Expert on mass production and quality. Will travel. Address IF-818, care Industrial Finishing.

POSITION WANTED.

Paint technician. College graduate. Interested in sales development or technical service. Five years' experience in development and testing of industrial finishes, including roller coating types. Address IF-817, care Industrial Finishing.

POSITION WANTED.

Industrial Finishes Salesman successfuly working midwest wants sales position with West Coast manufacturer servicing Los Angeles area. Address particulars to IF-808, care Industrial Finishing.

POSITION WANTED.

Successful serviceman, industrial finishes. Personnel training, methods, equipment, demonstrations, etc. Please give details. Address IF-809, care Industrial Finishing.

SALESMEN WANTED

For lacquers and enamels by national manufacturer for New England, Central New York and Los Angeles territories. Address IF-812, care Industrial Finishing.

SALESMAN WANTED

Having finishing equipment, paint or supply contacts, to sell on commission. Sensational new simple repeat supply product needed wherever wood is processed. Carry samples in pocket. Mail orders to us for shipment from stock to customer direct. Address IF-813, care Industrial Finishing.

SALESMEN-PROCESS ENGINEERS.

Established national manufacturer of chemical cleaning and processing compounds for the metalworking industry is expanding its sales force, particularly in the middle west and east. An excellent opportunity for men experienced in this field or closely allied lines. Also three openings for experienced chemical process engineers. Give complete details of your experience, type of industries you know best and territory preference. Address IF-804, care Industrial Finishing.

CHEMIST WANTED.

Chemist familiar with vinyl dispersions plastisols and organisols. We are an old established firm in Newark, N. J., and the man we are looking for must have thorough knowledge both theoretical and practical in the field of slush molding. Also injection molding. Excellent opportunity for right man. Our organization knows of this ad. Address IF-807, care Industrial Finishing.

NEW ENGLAND SALESMAN.

Have you some established business that you can add to ours to make a worthwhile territory? No limit to compensation. Close-at-hand laboratory and factory facilities for all types of industrial finishes. Write complete details, enclosing snapshot. Address IF-810, care Industrial Finishing.

EASTERN PENNSYLVANIA AND NEW JERSEY SALESMAN.

Long established manufacturer of all types of industrial finishes has plans for intensifying sales activities in this area. Adequate laboratory, factory and management available. If you want to work where intelligent effort is recognized and appreciated, write fully and send snapshot. Address IF-811, care Industrial Finishing.

SALES DEVELOPMENT SYNTHETIC ENAMELS.

Opening for man with synthetic enamel experience interested in sales development and technical service position in industrial finishes department. Supply complete qualifications if interested. MONSANTO CHEMICAL CO., MERRIMAC DIVISION, Everett Station, Boston, Mass.

MATERIAL WANTED.

Will pay reasonable premium for Pure Titanium. Call or wire collect, GEORGE GABLE, Perfection Paint & Color Co., Indianapolis, Ind.

WANTED TO BUY.

Will buy your dirty Thinners and Solvents. Send samples or letter giving approximate contents and solids. Address THE JOHANN CO., Room 416, 1180 E. 63rd St., Chicago, Ill.

FORD CUPS

THE VOL-U-METER COMPANY

Buffalo 16, New York

SOLVENT CLEANING SERVICE.

Dirty lacquer solvent can be shipped to us for distillation and returned to you clean and ready for use. Within 200 mile radius of Louisville a substantial economy can be realized. Cost runs from 14c to 19c per gal. KENTUCKY COLOR & CHEMICAL CO., 600 N. 34th St., Louisville 12, Ky.

FOR SALE.

Horizontal conveyor section-type oven, flat bed. Adjustable speed motor with 350 infra-red lamps. 4-ft. wide, 45 ft. long, to any height wanted. Like new. Also, four 55-gal. drums of baking enamel. Ivory, light blue, black and white. Address IF-816, care Industrial Finishing.

FOR SALE.

One 22x24-ft. R. C. Mahon baking oven, gas fired convection. 48 shelf-type drying racks for the above oven. One 50-in. Wagner roller-coating machine. For more details write EVANS-GLENN CO., 109 Clay St., Marietta, Ga.

DEGREASER FOR SALE.

3-ft. wide, 6-ft. long, 4-ft. deep, electrically heated. No water jacket needed. Portable, slightly used. MID-WEST HEATING & SERVICE CO., 724 E. Ohio St., Indianapolis 2, Ind.

FOR SALE.

30 drums Nitrocellulose cement suitable for household, hobby, leather, etc. Overstocked. $1.50 per gallon. F.O.B. Chicago. RAND CHEMICAL PRODUCTS, 2626 S. Dearborn St., Chicago 16, Ill. Phone, CAlumet 5-2866.

FOR SALE.

Degreaser—"Detrex", steam heated, solvent, Style VS-800. Approx. 8-ft. high, 3½-ft. wide, 12-ft. long. Slightly used. Exterior rusted. Interior good condition. $750. For more details write GEORGE KOCH SONS, Inc., Evansville 4, Ind.

FOR SALE.

Two Paint Ovens. One, W. S. Rockwell. Conveyor chain with 105, 6-ft. sections spaced 11½-in. on center. Single burner. Heat control. Second, Gehnrich & Gehnrich. Conveyor chain with 112 bars, 5-ft. long spaced 11¾-in. on center. Double burner. Heat control. Both complete and in working condition with Kidde Automatic CO2 Fire Control. Also three spray booths with exhaust systems. Write ARROW SAFETY DEVICE CO., Mount Holly, N. J. Mr. N. C. Park.

FOR SALE.

Six panel infra-red oven. Each panel 8x8-ft. with 160, 250-watt lamps; controlled by 36 fused and switched branch circuits. Entire oven completely automatic (single button control) in operation. Includes blowers, time delay switching; 4 magnetic motor starters and switch panels. LEADER ELECTRIC CO., 3500 N. Kedzie Ave., Chicago 18, Ill.

SURPLUS EQUIPMENT FOR IMMEDIATE SALE.

Szegvari No. 100 attritor completely equipped and including extra No. 60 equipment. New machine, never used.

Szegvari No. 1 Laboratory Model Attritor. Nearly new.

Abbe 75-gal. pebble mill. Used.

2 Abbe 25-gal. pebble mills. Used.

FARLEY & LOETSCHER MFG. CO.
DUBUQUE, IOWA.

WE BUY

OVERSPRAY PAINT SLUDGE

Collected from Your Spray Booths

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LOS ANGELES 58, CALIF.

JEfferson 8855

INDEX to Advertisers

Advance Paint Co. ..... Front Cover
Allied Finishing Specialties Co. 66
American Air Filter Co., Inc. 12
American Bleached Shellac Mfrs. Association 80-81
American Brake Shoe Co. 22-23
American Richwood Products Co. 119
Argenta Products Co. 106
Atlas Powder Co. 59

Barker Chemical Co. 63
Barrett Co., Leon J. 113
Barrett Varnish Co. 117
Baughn Chemical Products Co. 114
Better Finishes & Coatings, Inc. 121
Binks Mfg. Co. 26-27
Blakeslee & Co., G. S. 45
Brown Co., Andrew 31

Capitol Machine Co., The 33
Carborundum Co., The 21
Clair Mfg. Co., Inc. 101
Classified Advertising 125
Clinton Co., The 119
Coast Paint & Lacquer Co., Inc. 20
Compo Chemical Co. 116

Day & Co., James B. 79
DeBurgh Conveyors 90
Despatch Oven Co. 9
Detrex Corp. ..... Third Cover
Detro Mfg. & Sales Co., Inc. 104
Dolan & Co., Inc., V. J. 5
Du Pont de Nemours & Co., E. I. 64-65
Duralac Chemical Corp. 108

Egyptian Lacquer Mfg. Co., The 47
Enthone, Inc. 1

Ferro Enamel Corp. 87

Gerson Co., Louis M. 124
Glidden Co., The 69-103
Grand Rapids Varnish Corp. 2

Harding Mfg. Co. 120
Hercules Powder Co. 53

Ideal Chemical Co. 125
Interchemical Corp. ..... Second Cover
Iridescent Pigment Corp. of America 122

Jensen Specialties, Inc. 49

Kirk & Blum Mfg. Co. ..... Back Cover
Kirker Chemical Co. 71
Koch & Sons, Inc., George 35

Lawrence-McFadden Co. 114
Lilly Varnish Co. 10-11
Liquifill Mfg. Co. 109
Lowe Brothers Co., The 50-51

Maas & Waldstein Co. 13
Mahon Co., The R. C. 24-25
Mearl Corporation, The 19
Miracle Paint Rejuvenator Co. 123
Morrill and Renshaw, Inc. 100

National Chemical & Plastics Co. 7
National Lacquer & Paint Co. 124
National Paint, Varnish & Lacquer Association 38-39
Neilson Chemical Co. 43
New York Woodfinishers Supply Co. 109
Nikolas & Co., Inc., G. J. 37

Oakite Products, Inc. 100
Op-Al Electric & Mfg. Co. 115

Pacific Resin Co. 127
Pelron Corp. 6
Perfection Paint & Color Co. 85
Pittsburgh Plate Glass Co. 14-15
Potter Paint Co. 107
Processed Chemical & Coatings Corp. 8

Qualatone Products, Inc. 103

Randolph Products Co. 120
Ransburg Electro-Coating Corp. 18
Reliance Varnish Co. 75
Rockford Varnish Co. 91
Ronci Machine Co. 6

Shell Chemical Corp. 99
Sherwin-Williams Co., The 16-17
Snyder Bros. Co. 106
South Florida Test Service 122
Spe-de-way Products Co. 116
SpeedWay Mfg. Co. 125
Spruance Co., The Gilbert 77
Standard Coating Corp. 111
Standard Varnish Works 55
Stanley Chemical Co. 83
Stille-Young Corp., The 115
Sundstrand Machine Tool Co. 93

United Lacquer Mfg. Corp. 89

Varnish Products Co. 66
Vol-U-Meter Co. 113-126

Watson-Standard Co. 97
Wendell Mfg. Co. 123
Wilkerson Corp. 105
Wilkinson Equip. & Supply Corp. 104-124

Yarnall Paint Co. 95
Young Bros. Co. 122

Perm-Cote

can replace ZINC or CADMIUM in many rust-proofing applications

NEW! Your products are given a permanent rust-proof layer. Perm-Cote converts any steel or iron surface to a dense, non-metallic phosphate coat. The corrosion resistant qualities of the absorbent coating are multiplied by impregnation with a special oil that leaves the products dry to the touch.

GOV'T SPECS: Oil-impregnated parts show a salt spray resistance far exceeding the 36-hour test required by Army Specification 57-0-2c, Type II, Class B. The corrosion resistance of the phosphate coating itself is demonstrated by the fact that non-oiled parts have a salt spray resistance of 12 hours.

PROOF! You can supply the best proof! Send samples of your production work for Perm-Coting. Your inspection and tests when the samples are returned will tell you the whole story. Upon request, you can have the findings of both the government and private industry proving the superior rust-proofing achieved by Perm-Cote.

APPLICATIONS: Armament (rockets, mortar shells, machine gun links, gun barrels, other ordnance parts); metal fasteners (nuts, bolts, washers, screws); springs; hardware (hinges, hand tools, casters); appliances; sheet metal parts, and many others.

INVESTIGATE!

- ☐ Write for descriptive literature.
- ☐ Send samples of your work to be coated.
- ☐ Request a Detrex Field Engineer to call.

106

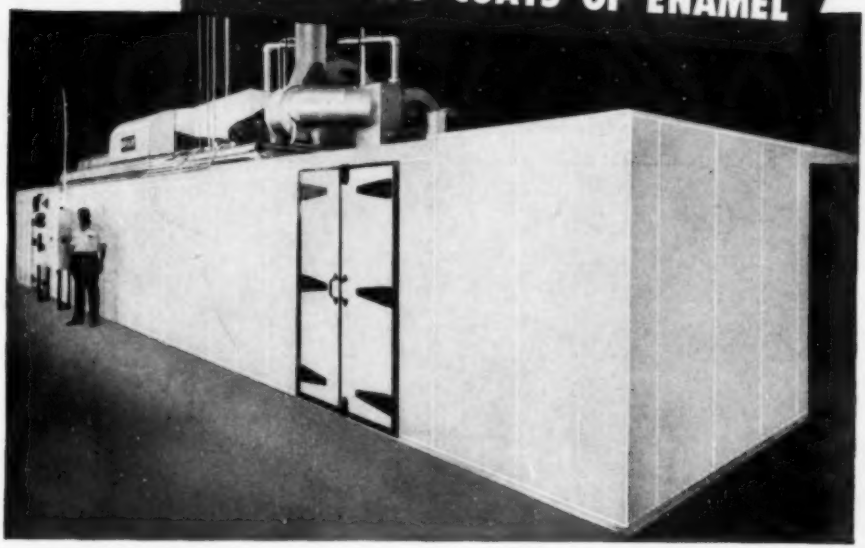
DETREX DETROIT MICH

DETREX Corporation

BOX 501, DETROIT 32, MICH.

KIRK & BLUM OVEN

DRIES TWO COATS OF ENAMEL



. . . Money-Saving Oven Installation at Estate Heatrola Division Noma Electric Corporation Hamilton, Ohio

This conveyorized, moisture removal oven dries two ground coats of frit on stove parts. The oven is direct gas-fired and automatically controlled.

From the unload end, the material passes immediately to spray booths where the second ground coat is applied. The material has retained enough heat from the drying of the first coat to immediately dry the second coat after spraying.

To conserve floor space, heating equipment is mounted on top of the unit, together with recirculating and exhaust fans.

Whatever your need in ovens, for drying, dehydrating or baking, consult KIRK & BLUM. Ask for booklet on "Industrial Ovens".

KIRK AND BLUM

INDUSTRIAL OVENS

The Kirk & Blum Mfg. Co.
3131 Forrer Ave.
Cincinnati 9, Ohio